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FEBRUARY 13, 1967

RAILWAY AGE

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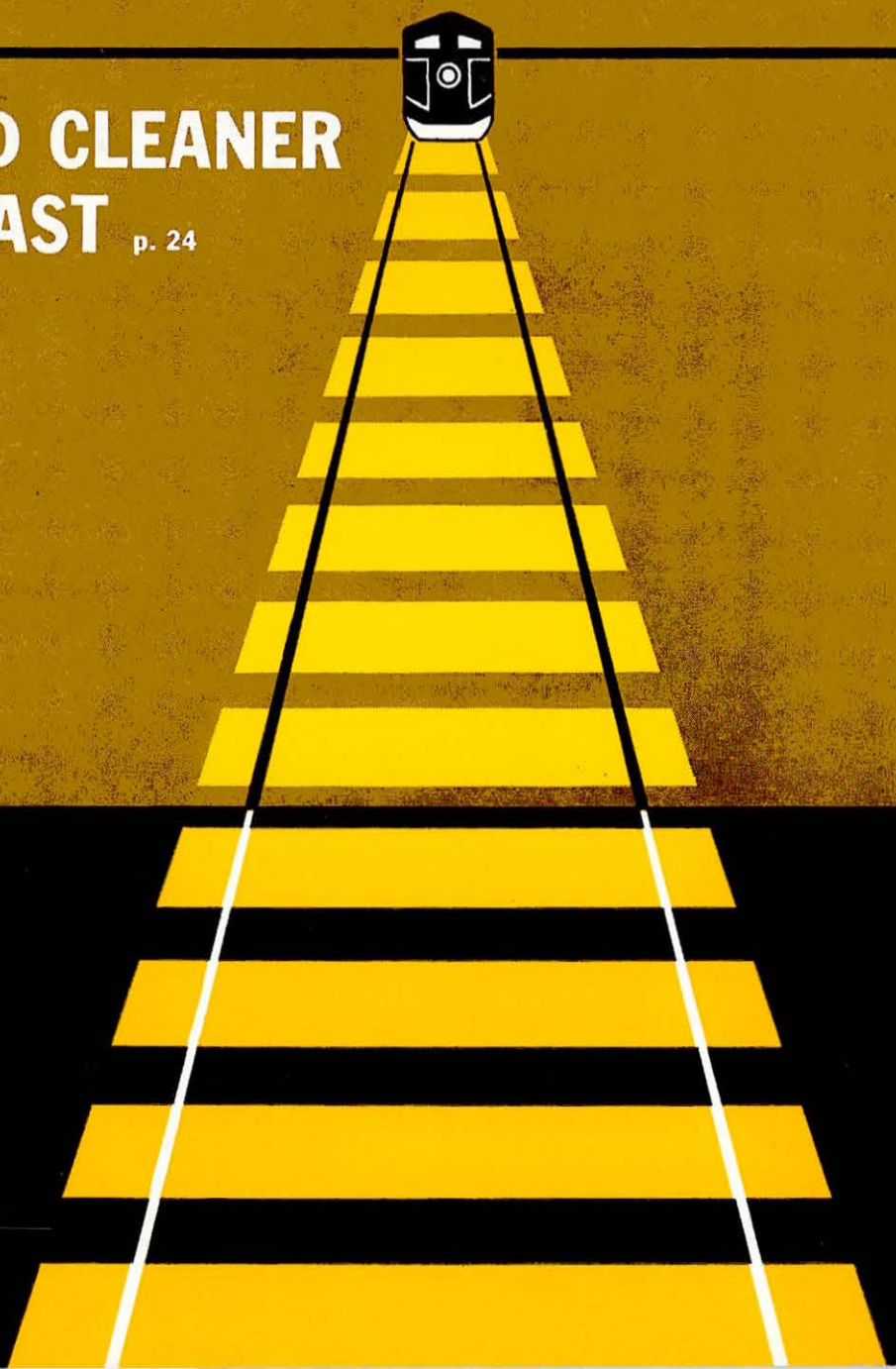

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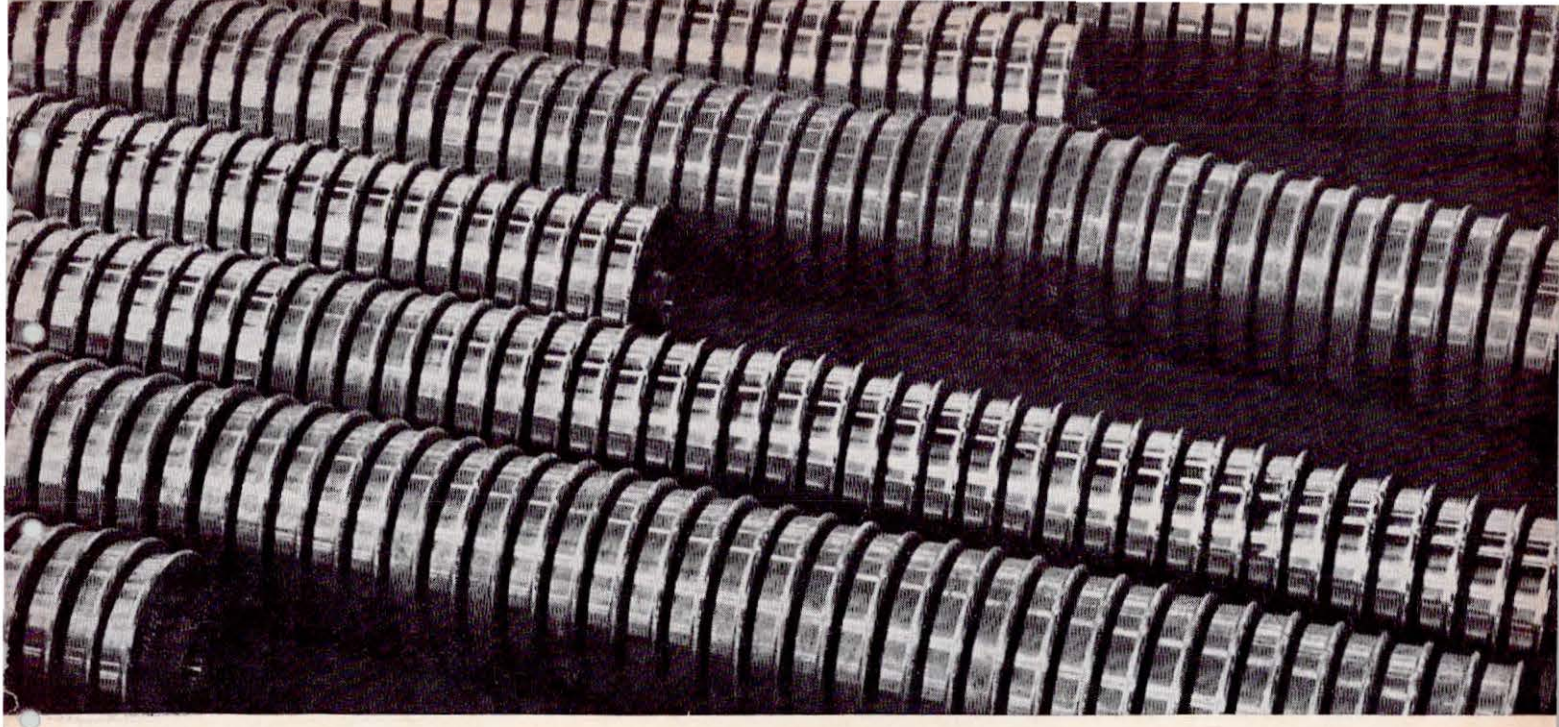

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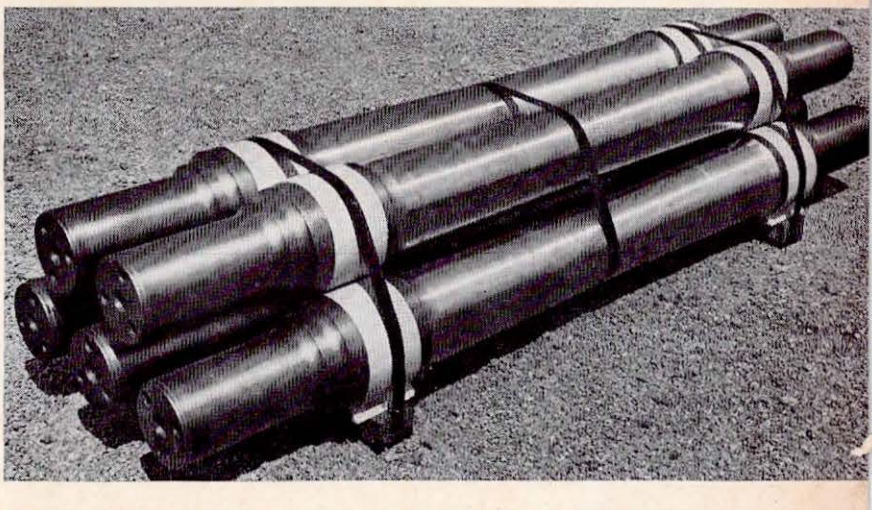

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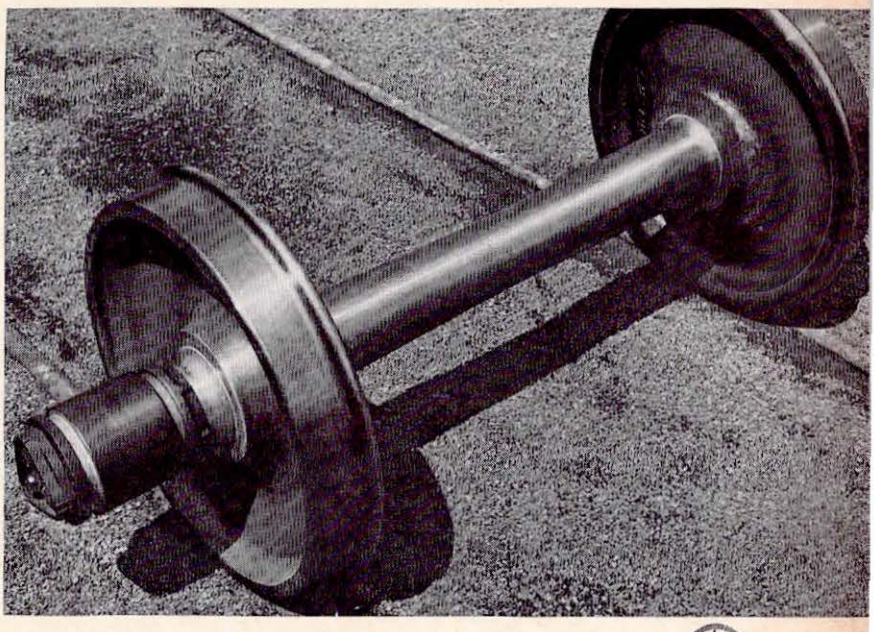

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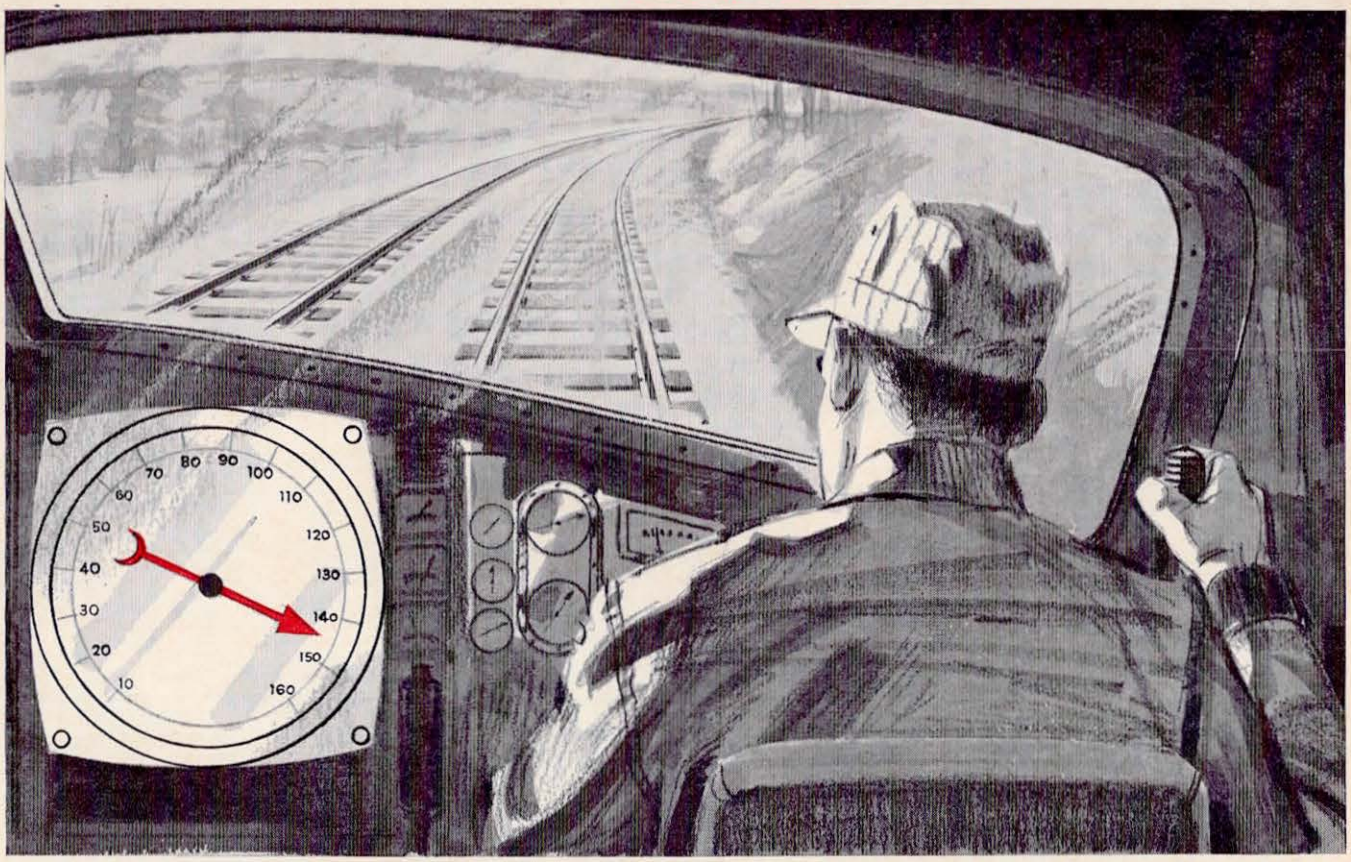

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RAILWAY AGE February 13, 1967 • Vol. 162, No. 6

THIS WEEK

20 Weed control: Can railroads do more?

The experts say "yes"—with emphasis. Millions of dollars, it is claimed, can be saved by using the most modern techniques.

24 New yard cleaner works fast—for less

This self-contained machine pushes and loads a gondola car ahead of it while cleaning a track and adjacent intertrack areas.

26 Newest Center Flow handles food products

Here's a description of the latest adaptation of the successful tubular carbody introduced by ACF Industries about six years ago.

36 Competing modes will get tougher

Dynamic trends in transport technology was the theme of the TAA Chicago meeting—and it showed other modes redoubling efforts.

54 Viewpoint—Erie-Ohio Canal: Who Pays?

The Upper Ohio Valley Assn. and others are challenging the economics of the proposed billion-dollar waterway.

DEPARTMENTS

45	As the Editor Sees It	7	Short and Significant
49	Freight Carloadings	42	Supply Trade
13	Lines on Labor	54	Viewpoint
8	Monday Morning Report	36	Watching Washington
49	New Equipment	12	Week at a Glance
32	New Products Report	23	World Report
38	People in the News	50	You Ought to Know

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SHORT AND SIGNIFICANT

Hard-sell days ahead for suppliers?

Suspension of the investment tax credit has caused a serious squeeze for major suppliers in recent weeks. W. Ashley Gray, Jr., chairman of the Railway Progress Institute (and president of General Steel Industries), was to give supply industry representatives at the RPI Seminar in Oshkosh, Wis. this week an outline of findings of surveys made by the RPI, the AAR, and the American Railway Car Institute (see p. 12) in recent weeks. All three surveys revealed sharp cutbacks in equipment orders by railroads—so sharp, in fact, that in some cases there had already been layoffs of employees by suppliers faced with gaps in production schedules. Gray says the trend is both understandable and serious for suppliers, and blames the investment tax credit suspension for railroad reversion to feast-and-famine buying patterns. "The suspension was aimed at cooling off the economy, not at killing it. One railroad with $100 million to spend on equipment will have a $28 million penalty by ordering now instead of waiting until the end of the year. I can't blame them for waiting, but still, rising demands for freight service for both business and defense purposes promises to create some real and serious problems."

●

DOT pencils in top staff jobs

The Senate already confirmed President Johnson's nomination of former ICC Chairman Everett Hutchinson as Undersecretary in the new Department of Transportation, and awaiting confirmation last week were the four assistant secretaries nominated by the President: M. C. Mackey, policy development; J. L. Sweeney, intergovernmental relations; Donald G. Agger, international transportation affairs; Alan L. Dean, administration. Mackey is presently director of the Office of Transport Policy Development in the Department of Commerce, Sweeney is co-chairman of the Appalachian Regional Commission, Agger practices law in Washington, Dean is associate administrator of the FAA (which will go to DOT). DOT's general counsel will be John Robson, Chicago attorney.

●

Merger: an opening for C&NW-Milwaukee . . .

The leadoff man was, predictably, Ben W. Heineman, as ICC Examiner Henry C. Darmstadter got things going last week in hearing the Chicago & North Western-Milwaukee Road merger case. Heineman, chairman and president of C&NW, put the two roads' case in terms not unfamiliar to those who have been watching North Western and Milwaukee in the months since their proposal was put into firm form. Consolidation, he said, would go far toward creating a sound transportation system in the north-central region; annual savings of more than $29 million which could be generated through merger "would provide the unified company with much needed financial strengthening." Heineman called attention to "fundamental afflictions" of the two properties—and he called consolidation the only remedy.

●

. . . and a second go-round for the GNP&B roads

Meanwhile, the roads which want to consolidate into Great Northern Pacific & Burlington were readying their case for reconsideration hearings, now scheduled for Mar. 6. Testimony to be presented will peg annual merger savings at about $40.3 million, a bit less than original estimates but $14.8 million above the estimate made by the ICC last year when it rejected the merger proposal on a 6-5 vote. The new hearings will be limited in scope—but they will get, in addition to the revised savings figure, testimony relating to job-protection agreements covering most employees of the involved roads and to GNP&B's approval of conditions requested by Chicago & North Western and Milwaukee.

MONDAY MORNING REPORT

C&NW-Milwaukee: How fast, how slow?

Maybe—just maybe—the railroad industry and the regulators are about to see just how fast a merger case can be made to move. Hearings opened Feb. 6 in Chicago on the proposed Chicago & North Western-Milwaukee Road consolidation—and, as the saying goes, the heat's on. A growing number of people are challenging the idea that a merger proceeding has to be the next best thing to a lifetime job for all concerned with it. And so C&NW-Milwaukee may take its place not only as one of the major cases of the decade but also as a laboratory model—a sort of experiment in expediting.

'A merger case is not a murder trial'

ICC Chairman William H. Tucker is one of the most dedicated foes of the so-called "regulatory lag" in this area—and Tucker doesn't mind calling a spade by its right name. Although due process and other legal safeguards should be protected by regulatory agencies, he declares, "there is no conceivable reason why a merger case should resemble a trial for first-degree homicide, with a dozen prosecuting attorneys and scores of defense counsel nitpicking at every statement."

A 'proving ground' in the western cases

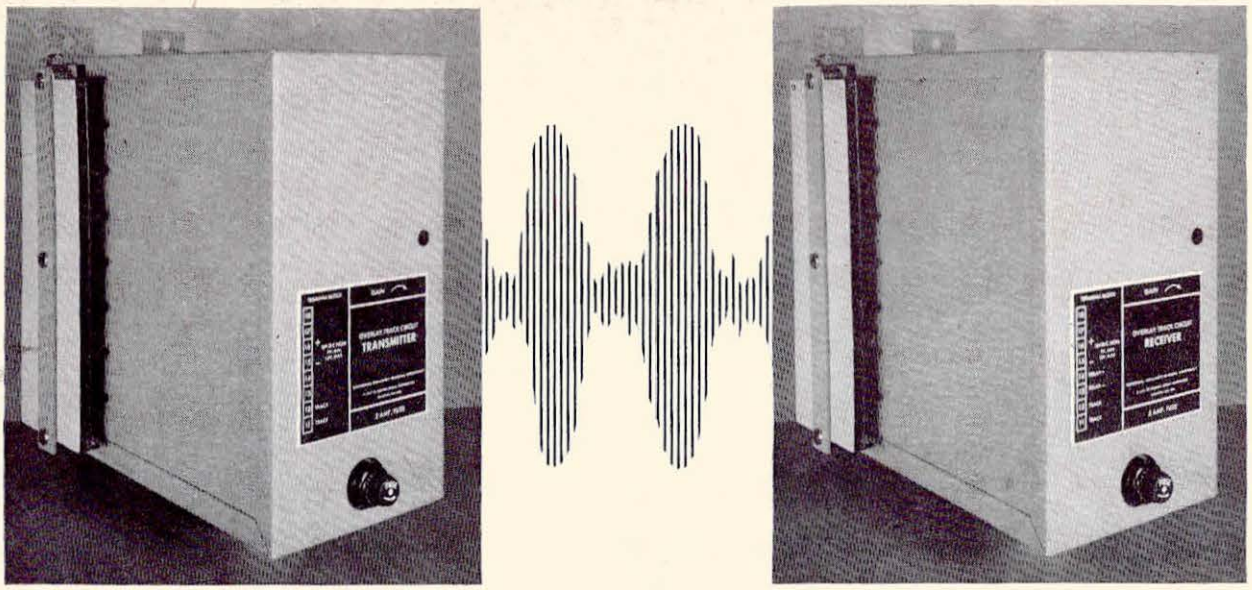
Tucker's hopeful that the western merger cases can be a proving ground for the use of expedited hearing procedures. He regards the progress thus far as "most favorable"—and he seems particularly encouraged by preliminary developments in the C&NW-Milwaukee situation. In this case, the ICC's chairman notes, "a traffic committee consisting of representatives of the parties has been formed to prepare joint reports on rail operations and practices. Primary emphasis has been directed toward securing basic traffic and financial data prior to the hearings. Stipulations by the parties have been another paramount goal. The cooperation already demonstrated by the parties should cut weeks off the hearings."

How keep it fair—and make it fast?

Most observers would probably agree that the speed-up goal is an admirable one. The problem, of course, lies in working out some kind of balance which protects the parties' right to present all material evidence and at the same time protects their right to obtain a prompt decision. Tucker doesn't see the two forms of "protection" as incompatible—but he's well aware of the need for broad-based support if fair and fast are to co-exist. There can be top-level prodding from the Commission itself, and with this as a guide, examiners may begin to act more forcefully in curtailing what Chairman Tucker calls "cumulative evidence and pointless cross-examination." All this may help to combat regulatory lag in the tough cases. But, finally and always, it is as the commissioner says: The parties themselves must recognize "that their cooperation is the essential catalyst to achievement of more expeditious and more productive hearings."

Toward better merger-managing . . .

Merger-watchers are fond of taking polite and not-so-polite swipes at the way things are done now. They regard merger cases, in particular, as happenings that only a lawyer could love. The point is, though, that even the lawyers are talking of the need for improved procedures and of ways and means of meeting that need. And that's the way it is, as C&NW-Milwaukee begins—as a big case in more ways than one.



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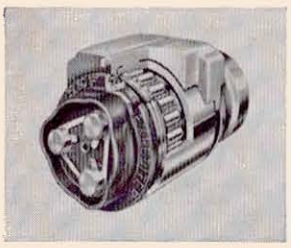

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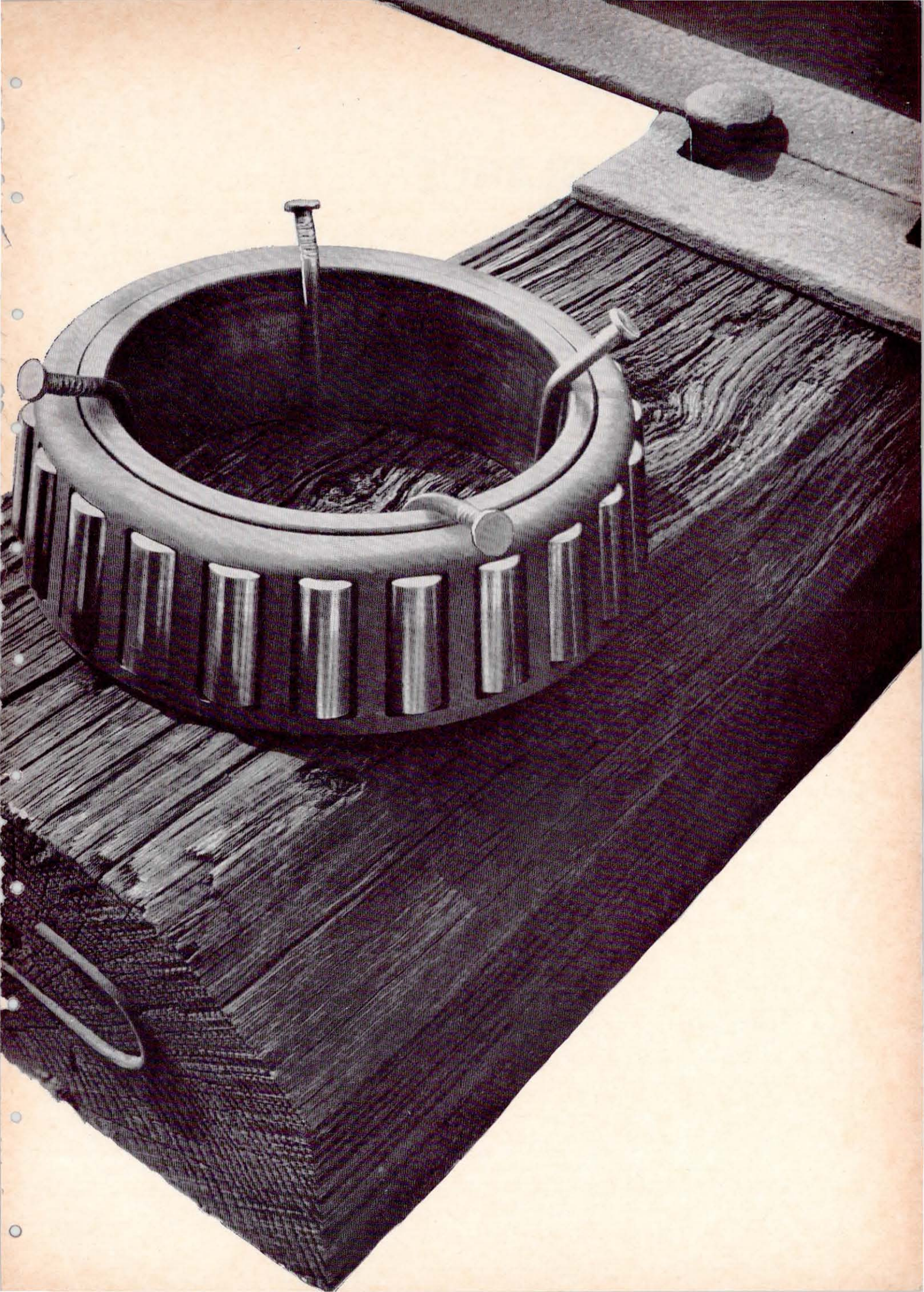

RAILWAY AGE
WEEKLY

FEBRUARY 13, 1967

WEEK AT A GLANCE

For the long range, a bright forecast . . .

Railroad carbuilders are heading into a decade of unprecedented activity—with current estimates pegging spending for new freight cars at $15 billion or more, over the 10-year period. The source of the forecast is the American Railway Car Institute's market-forecasting committee—and ARCI Chairman Frederic J. Schroeder explains the figuring this way: From 1967 through 1976, "railroads will spend on an annual average, between $1.3 billion and $1.7 billion. . . . Our committee calculates that by the end of the decade under study, railroad spending for cars will range between $1.7 billion and $2.2 billion a year, if we approximate an average annual order level of between 60,000 and 80,000 cars, including the inflation factor."

The committee, Schroeder says, covered three main areas of inquiry in making its projections: "One area is the projected demand for cars, by type, in terms of tonnage to be hauled. A second is the projected efficiency of the fleet, in terms of tons hauled per car and number of trips per car each year. And the third area is projected retirement of cars from the fleet during the period. The method employed estimates future tonnage and fleet size required to haul it, after retirements and after appropriate modification to allow for greater utilization and efficiency of the fleet."

Both the car and dollar estimates for the decade are significant. But, ARCI's chairman points out, the projections are as much a goal as a range. In the changing railroad picture, "pinpoint accuracy is impossible. Actual numbers are secondary. Accelerated research and development along with vigorous marketing—by all of us in the industry—are the primary considerations."

As for a summing up of the decade, start to finish, Schroeder puts it this way: "Although our problems over the short term are not inconsiderable, the opportunities for the long term are matchless."

. . . but for the short range, stormy times

Opinions differ on how considerable the short-term problems may be—but both Schroeder and Atty. Robert J. Casey, in addressing ARCI's annual meeting in Chicago last week, saw suspension of the 7% investment tax credit as the villain of the piece.

Casey, a member of the New York law firm of Clark, Carr & Ellis and tax attorney for Union Pacific, put it bluntly: Suspension of the credit "unquestionably will . . . bring investment in new rolling stock to an almost complete halt. Our preliminary estimates establish (that) anticipated 1967 equipment expenditures as compared to 1966 expenditures will decrease by some $1.2 billion."

Not everyone will agree with this (see p. 45). ARCI estimates, based on an AAR survey, put freight-car deliveries for 1967 at 75,000 to 80,000 units, representing an outlay of between $1.2 billion and $1.3 billion. The main concern is for second-half 1967 and first-half 1968, for railroads, carbuilders and customers alike.

Casey describes the situation this way: "Equipment orders have been cut to the bare essentials. . . . Whether measured in terms of equipment available to railroads or cutbacks which will be forced upon builders or further crises ultimately to be borne by our shippers because of an inadequate supply of freight cars, the suspension of the investment tax credit can certainly be said to have had a horrendous impact. Moreover, it's debatable as to whether there have been any compensating benefits to the economy."

While Schroeder and Casey were giving the good and the bad to ARCI, Railway Progress Institute President Nils A. Lennartson was presenting a generally similar view at a different forum, the New England Railroad Club. Estimates on 1967 orders differed only slightly—and all three men emphasized the peculiar and shattering problems which even a short shutdown of production facilities can cause.

Casey summed it up: "When the suspension is lifted, which at present must be considered to be Jan. 1, 1968, there will be a most substantial timelag in getting back into production. Orders which will come cascading down upon builders in January will not be delivered in substantial volume until late in 1968." By one estimate, a shutdown of just a month can trigger events which may keep a builder from getting back to full, normal production for six to nine months from the time production is resumed. The results: Recent gains in fleet capability may be erased; car-shortage impacts will be compounded.

Hotboxes: Only one every two million miles

Hotboxes, which at times seem to have been blamed for virtually every one of the railroads' problems, may soon be so infrequent that at least some of the responsibility for industry shortcomings will have to be laid elsewhere. The latest monthly performance, an average for all railroads in October 1966, was 1,957,140 miles per car set off and proved to be an all-time record.

The new journal performance figures includes plain-bearing and roller-bearing freight cars and is compiled by the AAR Mechanical Division on the basis of monthly reports received from individual railroads. October's performance topped the previous high of 1,862,611 car miles established in April 1966. The 1,000,000-mile-barrier was first cracked in April 1962.

In October 1966, 30 roads operated with individual records of over 2 million miles per hotbox setoff. Top performer was the Central of Georgia with 11,152,697 car miles and no failures, followed by the Duluth, Missabe & Iron Range with 6,256,508 miles per setoff.

GUS WELTY'S LINES ON LABOR

WELTY

JOB SECURITY is great stuff. Everybody, from corporation president to the lowest-paid laborer, likes to know at sunset that his job will still be there, come sunrise. At the very least, he likes to know that there'll be some substantial cushion for him in the event the job itself blows up. For years, under one agreement or another, railroads have done a better-than-fair job of providing this kind of security. Present arrangements, though, aren't entirely satisfactory to either management or the labor organizations. And, with revisions likely to be requested on both sides, it might be well to stop for a moment and consider a few comments made recently by J. Warren Shaver, administrative vice president-personnel services for United States Steel.

A GOOD NUMBER OF UNIONS, Shaver points out, are determined to build on what's been done in the job-security area over the past 30 years. The aims are, basically, two-fold—to provide increased protection against idleness over longer periods of time, and to set fewer eligibility requirements for the protection. U.S. Steel's vice president thinks there's room for agreement. But he's also deeply concerned that "one of the most critical aspects of the problem appears to have been completely disregarded by the very unions which are striving for these goals."

WHAT'S THE CRITICAL ANGLE? Shaver puts it bluntly: "It's elementary that we simply cannot have more job security than we have market security. And yet, those unions pushing these things the hardest have too often failed to recognize in their demands the problem of market security. In fact, [they] continue to protect many outmoded practices and contract requirements which weaken a company's ability to achieve market stability."

RAILROADS ARE HEADING INTO a time when more and more organizations will be demanding more and more protective conditions. The Clerks organization has already indicated its intentions (RA, Feb. 6, p. 12), and other unions probably will follow along with one sort of proposals or another. Hopefully, this won't develop into an exercise in crisis-bargaining. There are, as Shaver indicates, areas where management and labor interests are similar. But agreement will depend upon the realization that (a) protection is a matter of people, not of positions; and (b) the best settlement in the world is meaningless if it undermines the supporting structure.

THE WORDS are Shaver's, and they're words to reckon with in any discussion of job security: "I see no change in the iron law of economics—that unless a product is competitively produced and marketed, there will be no money to support the most sophisticated and enlightened labor contract."

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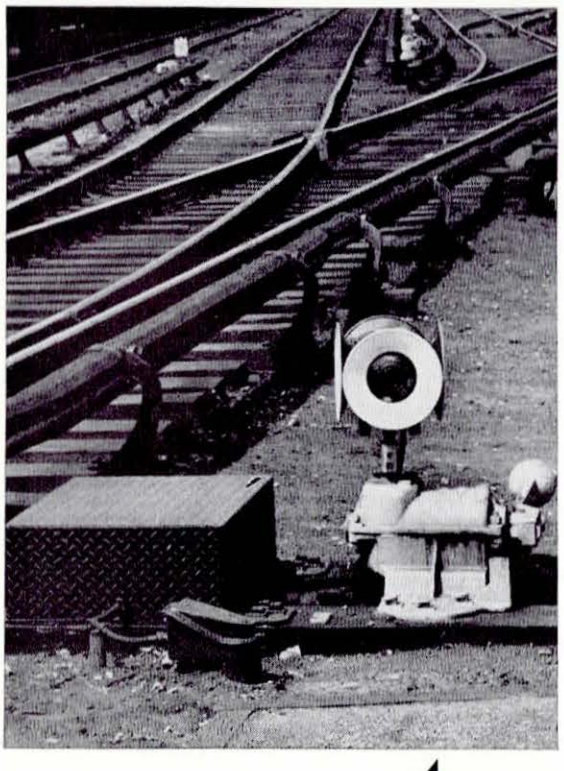

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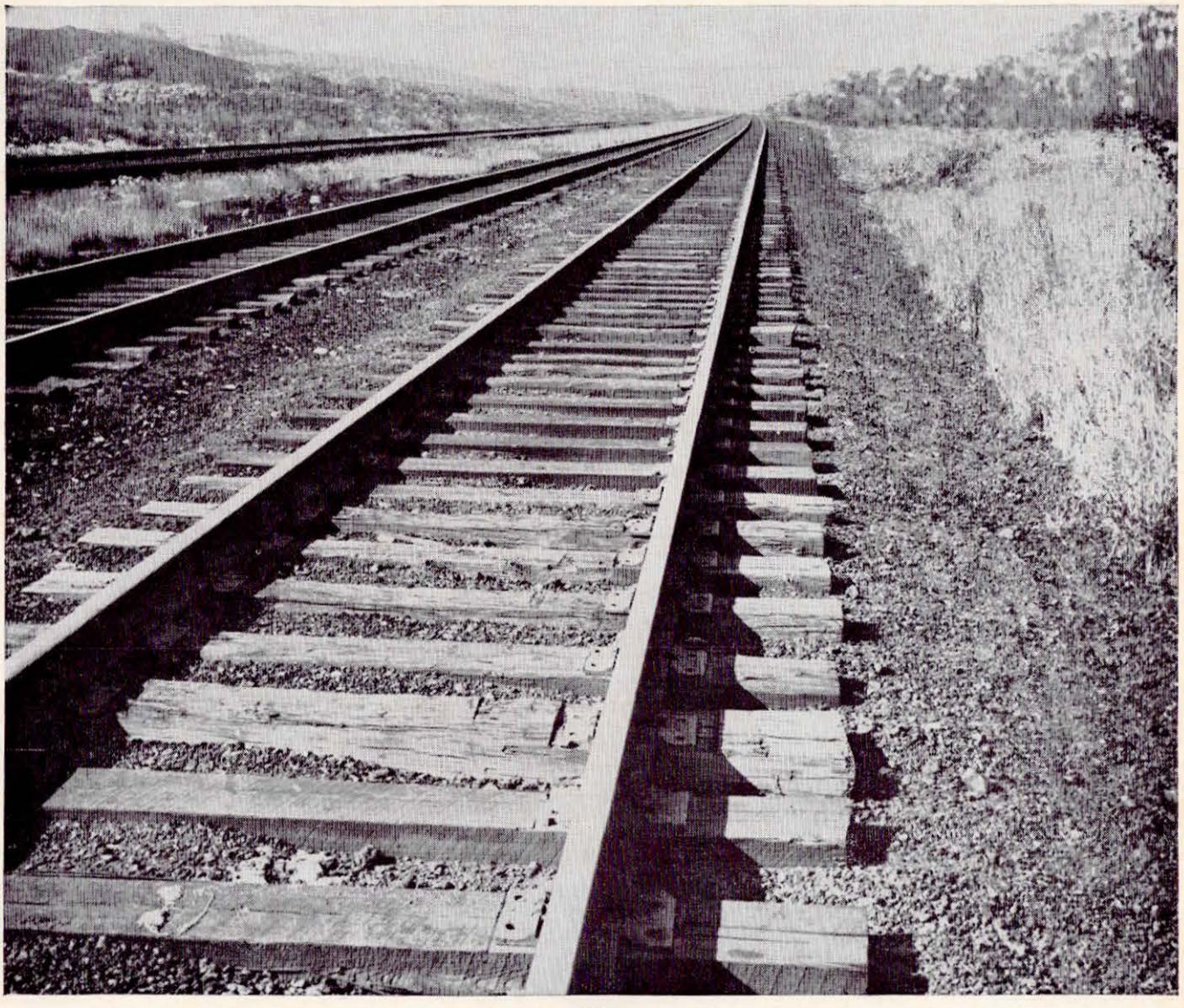

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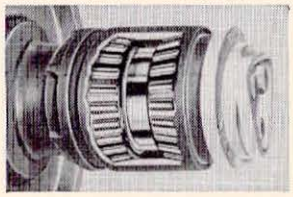

TIMKEN®
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BEARINGS

Circle 11 on reader service card

Weed control: Can we do more about it?

- **Experts say "yes"—that millions of dollars can be saved through improved techniques.**
- **Emphasis was on a scientific approach to weed control at a two-day Chicago session.**

Railroads are spending millions of dollars annually to control weeds and brush. According to W. M. Keller, vice president, Research Department, AAR, speaking at a recent conference on vegetation control, such expenditures amount to $30 million, of which $20 million is spent on chemical weed control and $10 million on mechanical means and hand cutting.

Keller said he felt railroads could do a better job of controlling weeds and brush than they had been doing. He pointed out that if railroads could find ways to save just 10% of this cost it would mean an annual saving of $3 million. That is why, he added, the AAR Research Department, together with the AREA Committee on Roadway & Ballast, sponsored the two-day conference.

The conference was held in Chicago under the chairmanship of Rockwell Smith, research engineer roadway, AAR. In attendance were 64 railroaders and 73 agronomists and suppliers. The theme of the seminar, said Smith, was "programmed weed control reduces maintenance costs."

● **Why control weeds and brush?** Several railroad speakers showed slides of bad weed and brush conditions on their own properties, which depicted how they interfered with operations. A number of reasons were cited for having effective weed control. They are: It (1) improves visibility at dwarf signals; (2) keeps line wires open; (3) eliminates traffic hazards; (4) keeps moisture in the ballast section at a minimum; (5) makes it easier to maintain ballast; (6) reduces fire hazard around relay houses, poles, buildings and bridges; (7) contributes to good agricultural control practices in reducing noxious weeds; and (8) contributes to safety and good housekeeping.

One speaker traced the history of weed control. Before 1920, he said, hand labor was used for scalping, mowing and cutting. This work usually was programmed by the section foremen. They tried their best to cope with the weeds and brush and, in general, did a good job because their rights of way were cleaner than those of the highways.

● **Chemicals come into use.** Although using chemicals for weed control started in the early 1900's, he said, it was not until after 1920 that they came into widespread use. In the beginning, the arsenicals, chlorates and borates were used and they did an effective job of control. They were applied as spray at rates ranging from 100 to 200 gallons per acre. The spray was applied during the middle post-emergence time, with the result that dead weeds were left standing and created a fire hazard as well as nesting material for rodents.

Since World War II, this speaker continued, the trend has been toward the pre-emergence treatments. Then the hormone herbicides 2,4-D and 2,4,5-T became the first break-through in vegetation control. In about 1950, other chemical products became available and were highly effective when used in combinations. They were the preventive type of chemicals. Following this, such proprietary chemicals as Telvar and monuron became available. When weed control moved into this stage, he said, it had arrived at a degree of sophistication.

In the late 1950's and 1960's, the speaker recalled, railroads began to streamline their work forces with the result that fewer men were available for weed control. As a consequence, additional custom applicators and contractors entered the weed-prevention and weed-spraying business.

In 1966, more weeds were prevented from growing by the industry than ever before, he said. This pattern, he believes, will continue in the years to come. However, another speaker observed that all-chemical control will bring its own problems and he believes that the trend will be back to chemical-mechanical control.

Both speakers felt that the railroad industry must learn more about the various products that are available for weed control. One agronomist stated that new concepts of weed control are becoming available. He thinks that weed control might better be called the science of weed control. It was pointed out that there are few agronomists working on railroad weed problems in this country and Canada, and it would be profitable for railroads to employ more of such trained men.

● **Chemicals and their action.** A few of the suppliers and agronomists spoke on the various chemicals and their effect on vegetation. It was brought out that there are presently more than 100 chemicals recognized for use in controlling weeds. These can be divided into three types—contact, selective and residual.

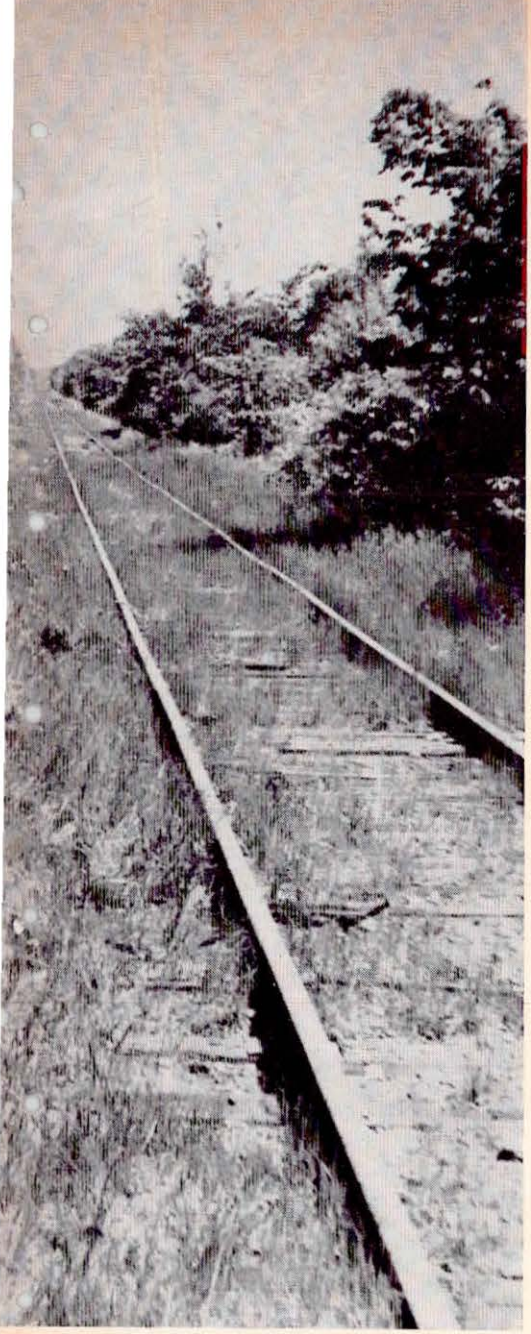
The contact type, it was explained, burns vegetation very rapidly. Oils and meta-arsenicals are examples of this type. These are most effective during high ambient temperatures. If applied during cool temperatures, a heavier rate of dosage is required to be effective. They are most effective when vegetation is growing at a high rate, which makes the time of application very important. Annual weeds germinate at certain times, but rainfall can change the time of seed germination. Contact chemicals have very little soil sterilization effect, making it necessary for areas to be treated more than once.

It was also explained that selective chemicals, such as 2,4-D and 2,4,5-T, have little contact action. But they enter the plant and are translocated to the root system.

Residual chemicals are basically applied to the soil. Applications should be heavy enough to affect current and future growth.

Presently, it was said, it is common practice to combine the contact-type chemicals with the residual type. Dozens of such combinations have been put together and they can be changed to suit the various weed combinations encountered.

For fighting annuals, it was recommended that pre-emergence residual chemicals or contact-type chemicals be applied, which can be done at a reasonable cost. Very often, it was said, one species is traded off for another surviving one. It is common to get a kill of 95% but the other 5% is the hard



WEEDS AND BRUSH must be attacked on a continuing basis. Even skipping treatment for one year permits vegetation to flourish. When treatment is delayed for two or three years, as shown here, costly measures must be taken.

"Spraying the lower third of a woody plant is just as effective (in dormant syraying) as spraying the entire plant and conserves chemical."

". . . Claims (for crop damage) that are not filed in good faith and are unjustified should not be allowed as they only tend to multiply such claims."

species to eradicate. No one chemical will kill all species since all chemicals have a certain amount of specificity. This means that programs must be modified the following year to kill the surviving species.

● **Solubility and rainfall.** Mention was made that the solubility of materials must be fitted to the rainfall of the area. Chemicals need moisture to become effective. In low-moisture territory, a high solubility chemical is required; in high-moisture country, the reverse is true.

Where bare ground is not desired, the contact-type of chemical can be used in combination with a high residual chemical to knock down the vegetation and then maintain control. Abatement programs are of this type and usually give from 80% to 90% control. Selective control will kill the Johnson grass but will let the Bermuda grass survive.

● **Use of oils.** It was said that oils have been used for some time as a herbicide of the contact type, either alone or in a certain ratio with water or an emulsion. Fuel oil also is used as a contact killer.

The 2,4-D's and 2,4,5-T's are in general use. Their basic formulation is as salts or esters. Ammate salts are used for broadleaf plants and also for combinations of species. In ester form, 2,4,5-T is primarily used for woody plants.

MCP is used for specialized problems, such as the control of horsetail.

TCA may be useful for perennial grass treatment. It has good performance where moisture is present or follows the application. In a drouth, the results are not as satisfactory.

Substituted ureas (CMU was the first) vary in degree of solubility. When used for perennial weeds they require a high rate for control, such as on bindweed and Canada thistle.

Radipon is an industrial version of dalapon and is available for the control of perennial grasses and cattails. If used in combination, the additive should not give a too rapid top kill in order to give the Radipon a chance to work. Benzoic acids, available in liquids or granular formulations, are for deep-rooted species, such as bindweed, thistle and spurge, and also for woody vines. Timing is important for these species.

DSMA (dimethylarsenate) and MSMA (metaethylarsenate) are said to be gaining in popularity. They are less toxic than inorganic arsenicals that produced many damage claims in the past. Recent studies show they are effective on the broadleaf species. But temperature is a big factor and they should be applied above 60 degrees.

Tordon is a newer material and is arousing interest due to its trials in test plots for the control of deep-rooted plants. A little of it is said to go a long way. Available in liquid and granular formulations, it has performed well on woody plants with spot application. However, it must be handled with care because of its potency.

● **Treatment of brush.** Brush control was discussed at length. One railroad man said that since the section forces were gone, his road had been using the spot-treatment method of control. This was not very successful and the brush was getting out of control, especially under the line wires. A new plan will be put into effect this year, he said. A lethal dose, costing about $130 per mile, will be sprayed on one-third of the mileage each year. In three years, he hoped that good control of the brush can be obtained.

A professor stated that dormant spraying of brush produces much better control than hand cutting because of regrowth with the latter method. Dormant spraying should be done in winter when the foliage is gone, he added, so that the chemical is not wasted on leaves. Spraying the lower third of a woody plant is just as effective as spraying the entire plant and conserves chemical. It was his opinion that railroads would be money ahead if they used a heavy application the first year, eliminating the major brush species, then following up the next two years with lighter dosages. He felt it would be advantageous to the railroads if they made a three-year contract with a contractor, making him responsible for controlling the brush.

A supplier took a somewhat contrary view. He advocated spraying brush when the plant was in full-leaf expansion. By doing so, the plant presents a live target and there is no guessing whether it is alive or dead. Also, brush herbicide spraying can be continued throughout the growing season, he added.

A contractor applicator stated he had found that different species of woody plants require specific chemicals to obtain a kill. Knowledge is now available, he said, whereby the proper mixture of chemicals will kill a large number of species. His firm was using a new

Trains, trucks and helicopters battle weeds

additive, called Transfer, which, he said, makes the D's and T's more effective on red maple, oak, ash and witch hazel.

● **All equipment needed.** A number of contractor applicators spoke on today's spray equipment, saying there was need for all kinds for fighting weeds and brush. This includes spray trains, on/off-track trucks and helicopters, all of which were said to be good when used at the right time and place.

It was said that equipment is available today that permits a change in chemical mixture right at the nozzles instead of in the headers. This permits a spray train to be used for general-purpose spraying and, at the same time, for specific spot treatments. Such equipment was said to be advantageous for yard work where higher dosages and different chemicals are required. Each section of the spray booms must permit pressure control. Some outfits have several booms so that pressure can be controlled as desired.

● **Truck use is increasing.** Spray trains are supplemented by on/off-track trucks, which can be equipped with all of the gauges and meters that are found on spray trains. Right now, it was said, the use of trucks is in its infancy and more use will be made of them, especially for branch-line and yard-track spraying.

It was suggested that spray trains could operate at a speed of 40 mph, as is being done in Great Britain. But it was admitted that this speed could not be maintained in all areas. It was pointed out that trains themselves create air currents and cause drifting of chemicals.

The spray particle size was said to be largely controlled by the type of nozzle used, which may be of the cone, full-cone or flat types. As pressure builds up, the particles get smaller in size. The higher pressures are the ones that contribute to drifting. Today's spray nozzles were said to be so specialized that they can apply as little as a pint of chemical per acre with low drifting.

● **Applicators and formulators.** Several speakers stated that unless chemicals were applied properly, money was being wasted. They said the advice of formulators and contractor applicators can prove very helpful in obtaining good control. Formulators were said to be well versed in their products and can make wise recommendations. Applicators, by and large, do a good job and are just as anxious to obtain satisfactory results as are the railroads, they said. In general, contractor applicators have good equipment and can obtain proper coverage.

One contractor applicator said he felt there was a mutual obligation that contractors and railroads owed each other. He felt that contractors should support railroads in all their efforts to improve the industry. On the other hand, railroad engineers have the obligation of convincing their top managements of the efficacy of weed control. Both, he said, have the obligation of brightening the corporate image.

He added that each railroad's weed problems were different and varied mile by mile and year by year. He advocated that control programs should be made carefully with recognition given to the specific conditions on the ground. On the other hand, the applicators should keep careful records of their applications.

● **Costs are held down.** Another contractor stated that applicators have done a good job in reducing their contract prices, although their own costs for labor have gone up. As an example, he said that 2,4-D esters used to cost $9 per gallon applied, and now cost about $7. The larger volume of chemicals used has brought those prices down. He admitted it was hard for a railroad man to evaluate the dollar value of weed control. But he ventured to say that, if the cost of chemical treatments could be compared with hand-labor costs of years ago, today's treatments would not only show better results but would be more economical.

Where experience counts

He reminded his listeners that the applicators want their treatments to work out for the best. Sometimes, he said, local commercial suppliers may sell a product slightly lower in price but they will not guarantee the results or check them later on. He said the applicators have a wealth of experience that is available to the railroads.

● **Laws and claims.** One railroad man deplored the legal restrictions set up in many counties relative to the use of chemicals. Such regulations interfere with the type of program that should be followed. In the state of Washington, he said, he cannot spray any time the wind is greater than 7 mph.

A state weed-control advisor said there are noxious-weed laws which are enforced at the option of the county authorities, if the majority of the landowners in that county agree. But these laws apply only to public property and not to landowners, he said.

Illinois also has a 2,4-D law, he said, but it is not in effect unless the county asks for it and holds a hearing. He reported that Illinois has never denied the use of 2,4-D so far, but it does require that spraying pressures be kept below 30 psi.

A professor urged that spray equipment be made just as simple to operate as possible because very often trained personnel is not available. One time, he said, he watched a spray train in action and noted that the operator of the brush-spraying nozzle was more interested in startling the birds in the trees than he was in proper spraying.

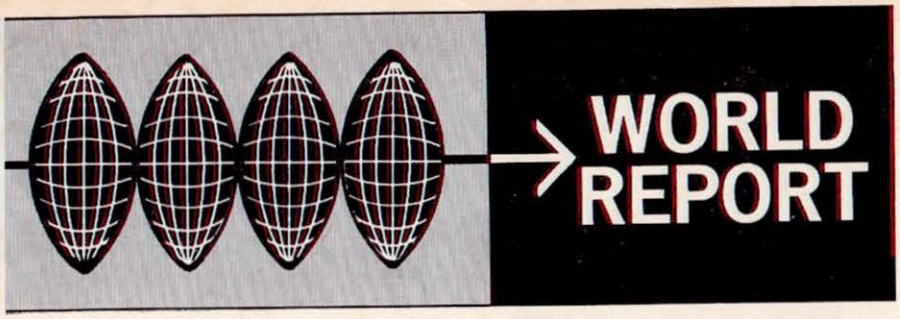
A railroad man said that damage claims for weed spraying are first investigated then turned over to the road's claim agent who, in turn, referred them to the contractor applicator. Usually, he said, his road shared the cost of a damage claim with the contractor.

This prompted a contractor applicator to say that such claims should be brought to the attention of the contractor as early as possible so they can be investigated and settled promptly in the field.

● **Aerial spraying.** A helicopter applicator related how weed and brush-killing chemicals are applied from the air for making fire guards along railroads, under power lines and along gas lines and river banks. For railroad spraying a thickener is added to the chemicals to reduce drifting. Spray work is usually started at dawn when sufficient light is available and continues for three or four hours before the wind stirs. The use of thickeners, he said, adds to the time for helicopter spraying. Aerial application of chemical sprays is carried out at a lower volume, the application being from 5 to 10 gallons per acre.

This speaker pointed out that, while bulldozers can construct good fire guards, they can only work where the terrain permits their use. Also, bulldozers usually work early in the year and weed regrowth often destroys the effectiveness of the fire guard. If bulldozers are worked later in the year, he said, the railroad has lost much of the protection afforded by fire guards.

On the other hand, he said, helicopters apply the chemicals when they are needed, starting their program in the lowlands where growth has begun and working up in elevation to follow weed growth. In addition, he said, helicopters work independently of any work-train service and are neither interrupted by nor interfere with rail traffic. ■



EUROPE'S CREEPING COUPLER.

A decision on automatic coupling for Europe's million-plus freight and passenger car fleet creeps nearer. But oh, what a time it's taking!

After more than half-a-century of intermittent discussions and interminable research, the pace quickened in 1965. Researchers hinted agreement on a basic design. And by the end of 1965 informed observers anticipated a decision would be taken early in 1966.

But it was not until December that two leading European railway officers announced general agreement on the form of the new coupler. In Paris, M. Louis Armand, secretary-general of the UIC, claimed Europe would have automatic couplers by 1975-76. But in Malmö Mr. Erik Upmark, general manager of Swedish State Railways and newly-named president of the UIC, stated: "It remains to be seen what the various Finance Ministers will say when asked for the huge financial backing necessary for the changeover."

Aye, there's the rub! Left to railway men, the decision would have been taken long ago. But the cost of installing automatic couplers, rising every year, is now estimated at well over two billion dollars for Europe as a whole. And since most European systems are state-owned, the money will need to be dragged from the taxpayers.

Of course, the problems in the way of agreement have been immense. And to get 26 governments to co-operate on a policy involving hard cash takes time and kid-glove diplomacy.

Meantime around 100 European railway workers every year are killed, and many more maimed, coupling cars by hand. And the immense economic advantages which would flow from a through-Europe system are lost.

PAY-AS-YOU-GO PLAN.

Not all financing problems are as difficult as the coupler problem.

All over Europe, steam locomotives are being shunted aside to make way for modern electric and diesel traction units. Fast, smooth running, comfortable passenger cars have been introduced. Old freight cars are being replaced by efficient swift-load easy-discharge cars.

Largely responsible is Eurofima, a company set up in Basle, Switzerland, 10 years ago by a group of European state railroads all anxious to raise ready cash.

Funds are raised by Eurofima through public bond issues, long-term private loans and bank credits.

Individual railroads can place orders for new stock with Eurofima, then meet the bill on a long-term pay-as-you-go system. In 10 years, the company has financed the purchase of 860 diesel and electric locomotives, 445 passenger cars and 12,000 freight cars.

Now controlling funds worth $224 million, Eurofima, has not added a single employee to its original staff of seven.

NEW LINE FOR RAIL BUFFS.

With steam vanishing fast from the European scene, rail buffs there must find their pleasures where they can. So they should take special interest in a new mountain line—claimed one of the most audacious of its kind—opened in Yugoslavia on November 26.

Not that the 120-mile standard-gauge line will be worked by steam—in fact electrification is already well under way. But, running from Sarajevo, Bosnia, down to the Adriatic port of Ploce, it crosses some of the most spectacular scenery in Yugoslavia.

On one 15-mile section, between Bradina and Konic, Yugoslav engineers found it necessary to drive 45 tunnels with an aggregate length of seven miles. Concrete viaducts span ravines and gorges, and steel bridges take the track across an artificial lake and a river.

Though a number of foreign construction firms were invited to bid for the job, the engineering contracts all went to Yugoslav companies. Rails are mainly 100 lb., similar to German Federal Railway's S49 rails, laid on concrete and timber ties.

All stations have color-light signaling and the whole line has CTC. Most signal equipment has been built in Yugoslavia under license from ITT.

When electrification has been completed the line will be worked by 5600-hp Bo-Bo electrics supplied by Traktion Union, a European consortium. This group will supply 95 units during the next few years and 100 will be assembled under license in Yugoslavia.

Initial motive power will be provided by General Motors GM-16 1950-hp diesels.

Total cost of the new line—to replace an old narrow-gauge track—is estimated at $125 million.

NEW START FOR THE HEDJAZ.

It's good news that work on rebuilding the Hedjaz Railway, one of the world's famous lines, is to start again. Reconstruction began in 1963, but ground to a halt when one of the companies involved hit financial trouble.

Now, by agreement between the governments of Jordan, Saudi Arabia and Syria, the contract has gone to a new company formed by the two British firms—Martin Cowley Railway Construction and Alderton Construction—which held the original contract. When work was stopped about 186 miles of 522 miles of embanking and bridging work in Saudi Arabia was completed.

Construction of the original Hedjaz—Winston Churchill called it "a slender steel track . . . through hundreds of miles of blistering desert"—was completed in 1908, after a fund-raising operation which could give points to many of today's charity organizers. Before the first car moved on the line the Turks had a surplus of $1.75 million!

Though only small sections of track were destroyed during the first World War, the line was allowed to rust and decay as political discord hit the Middle East after the war.

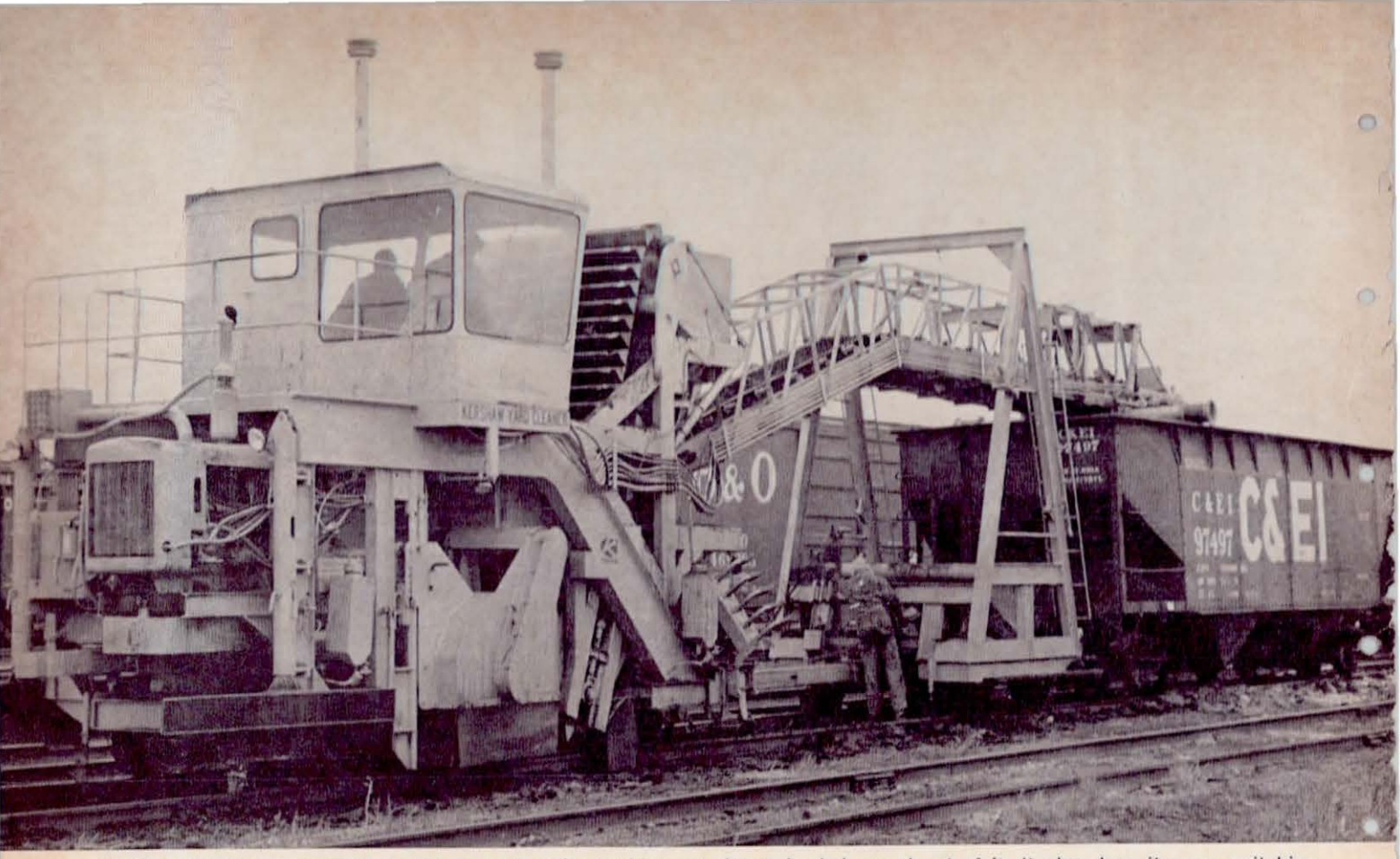
By the time the last spike has been driven, in 1968, more than 60% of the rails, nearly all the ties and all the switches will have been replaced. Value of the Cowley- Alderton contract is given as $9,800,000.

SWINGING BRITAIN?

A London evening newspaper reports: "Two railway workers, a station inspector and a porter, one 63 the other 61, are being sent to 'charm' school to learn how to deal with passengers. It is part of British Rail's brighter and better vice campaign." Really, this is too much, even for a system with a $280 million deficit!

But to give BR the benefit of the doubt, maybe that word should have been "service." Printer's bugs like this give every editor nightmares once in a while.

—JOHN LEVETT



YARD CLEANER is powerful enough to work while pushing an almost loaded car ahead of it. It also does its own switching.

This new yard cleaner works fast—for less

The machine scarifies cemented deposits, plows shoulders, sweeps track and loads material into cars it handles by itself.

"I have been wanting to clean the tracks in this yard for several years but we couldn't spare the necessary manpower to do it," said H. Tindall, track supervisor for the Chicago & Eastern Illinois at Steger, Ill. "This yard-cleaner is doing the work faster, cheaper and better than we could with a gang of men," Tindall continued.

The machine Tindall was talking about was Kershaw's Yard Cleaner which the C&EI had under lease on a short-term basis from the Royce Kershaw Co., for cleaning the tracks in its Sibley Street yard in Dolton, Ill. It is a self-contained on-track machine that pushes and loads a gondola car ahead of it while cleaning a track and the adjacent intertrack areas. It also cleans the track through turnouts.

The reason the road was cleaning the yard, Tindall explained, is that a clean yard provides a safe, uniform area for trainmen to walk while switching and coupling cars and for carmen to work. Also, the tracks can be readily inspected and are easier to maintain.

● **Has strong sweeping elements.** The yard cleaner is equipped with a 46-inch-diameter broom having sweeping elements made of 1-inch rubber-covered steel cables. The broom sweeps the material into an elevator system where buckets raise and drop it into a hopper. A water-spray system is available for reducing dust at the bucket elevating system and in the hopper, which the operator can turn on as desired.

From the hopper the material is carried by a discharge belt conveyor that deposits it into an open-top car. The discharge conveyor is supported by a boom which is raised and lowered by a powered winch on an A-frame car. But, while the machine is in use, the boom is supported by rollers that travel along the sides of the gondola or hopper car.

For loosening compacted materials the yard cleaner is equipped with scarifying teeth that extend across the entire tie length and into the intertrack areas on each side. It also is equipped with side plows that scrape the material from the intertrack area toward the track where the broom can pick it up. The machine is diesel powered. All its operations are hydraulically controlled except the broom, which is mechanically driven.

● **Loads entire car length.** The A-frame car has a special car coupler and air hoses for coupling onto hopper or gondola cars. The yard cleaner is joined to the A-frame car by a telescopic

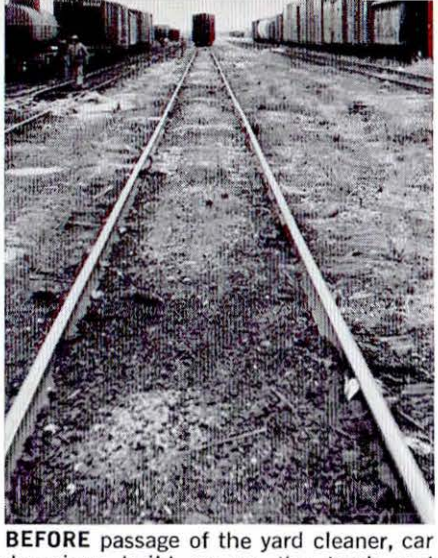
coupler bar. When first coupled to an empty car, the telescopic coupling bar is in its extended position, which places the end of the discharge belt conveyor in position to load the near end of the car. As this area is filled, the telescopic bar is shortened by pins to a second loading position, then to third and fourth positions as the car fills up. This insures full loading of a car. When fully loaded the car is pushed by the yard cleaner to the end of the track and spotted, where it is later picked up by a switch engine. The machine then picks up another empty car.

● **Loads car in an hour.** The C&EI put the Kershaw Yard Cleaner into operation as soon as it arrived, working the unit 10 hours a day, seven days a week. In 14 working days, the machine had cleaned 32 tracks (ranging from 2,800 feet to 4,500 feet in length), and 30 turnouts. It had loaded 69 cars in this period, averaging 55 cu yd per car. Tindall reports the machine actually loads a car in an hour but, because it does its own switching, the average production was one car loaded and set out every two hours. Additional time was required to scarify and plow most of the tracks and to grade the shoulders where the tracks were not at the same level.

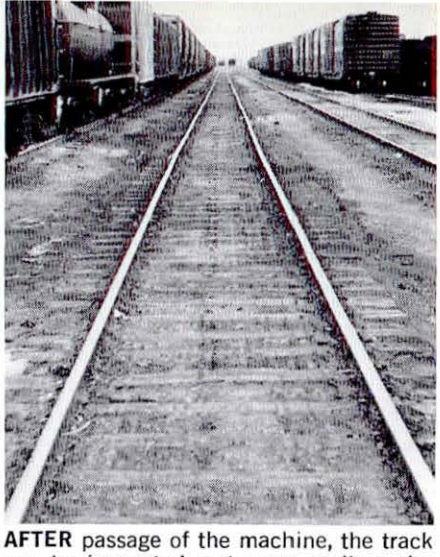
● **Small crew is used.** For the Sibley Street yard cleaning, Tindall used only a foreman and one man. Their function was to walk ahead of the machine to remove items from the track that might lodge in the elevating system. These objects—pieces of wood, brake shoes, car-truck springs and journal-box covers, dunnage timbers, brickbats—were tossed into the gondola car. Two Kershaw men operated the machine, one man in the cab at the controls and the other walking on the ground to see that the broom, plows and scarifying teeth were working at the right depth to do a proper job.

From his cab, the operator has a clear view of the loads in the buckets of the elevating conveyor. The working speed of the machine is controlled to keep the buckets relatively full. The operator also watches the discharge of material in the car so that the telescopic boom can be shortened as required.

To obtain maximum use from the new yard cleaner, Tindall said it was important to work closely with the yardmaster. This was accomplished with the aid of a radio set placed in the cab of the cleaner. Because of the speed with which the work was done, he added, and the smooth walkways left in the intertrack areas for trainmen, the cooperation of the yard superintendent and the yardmaster was assured. ■

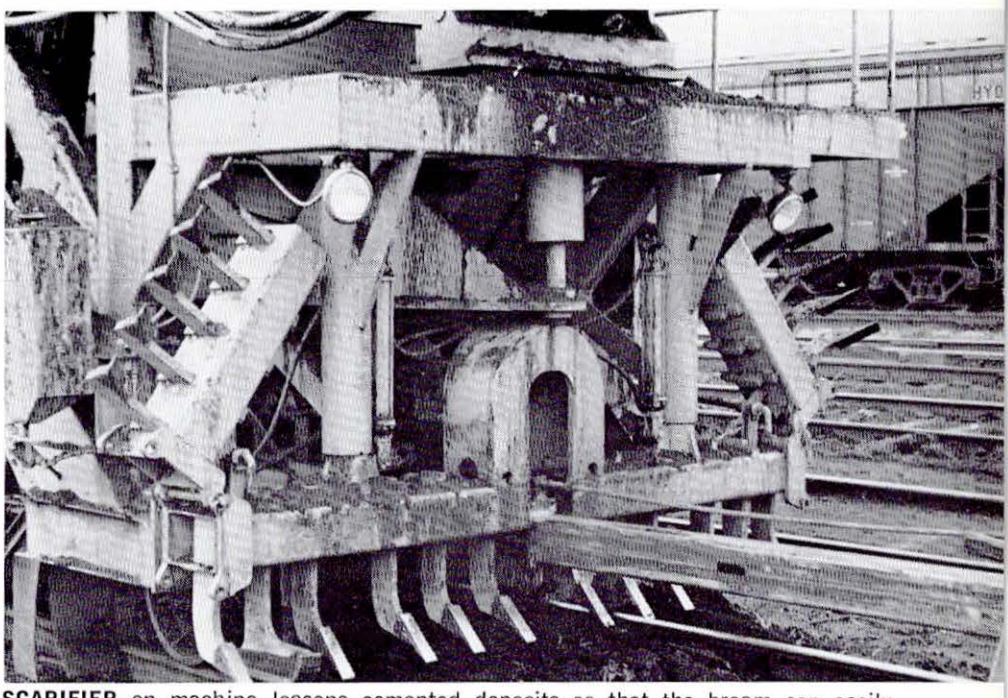


BEFORE passage of the yard cleaner, car droppings build up on the track and weeds as well as large objects hamper walking between tracks.



AFTER passage of the machine, the track can be inspected and more easily maintained. Also, switchmen have better conditions for their work.

How the new yard cleaner works



SCARIFIER on machine loosens cemented deposits so that the broom can easily pick them up. Scarifying teeth extend across entire tie length.

TELESCOPIC DRAWBAR between the machine and the A-frame car can be shortened in increments so picked-up material can be distributed in the car being loaded.

FOODSTUFFS CAR has joined growing fleet of ACF special purpose bulk materials carriers which will soon number 20,000 units.

Newest Center Flow handles food

Adaptations of basic pear-shaped carbody make possible handling of diverse bulk commodities.

A new version of the Center Flow dry-bulk-commodities car, designed especially for shipment of food products, has been introduced by ACF Industries. The first ten of these "foodstuff cars," valued at more than $200,000, have already been delivered to the Rock Island.

RI is using its new Center Flows for transporting flour, starch and sugar for midwestern food producers. Each 100-ton car has a 5,250-cubic-foot body. The design is the latest adaptation of the basic tubular carbody ACF introduced almost six years ago. Currently, 20,000 Center Flow cars of various arrangements and sizes are in service and on order.

● **Simplified handling.** John S. Carlson, ACF vice president and Shippers' Car Line division general manager, points out that the foodstuffs car provides "more capacity and easier loading and unloading than box cars or conventional covered hoppers." It is, he notes, based on the original high-cube 5,250-cubic-foot Center Flow developed for low-density, dry-bulk materials. Its hopper compartments have been redesigned to match the flow characteristics of light, powdery foodstuffs. A new fluidizing outlet has also been developed for the car.

Tailoring of each model's size and its loading and unloading arrangements to match the products it will haul has been a continuing feature of Center Flow development. At the ACF Technical Center in St. Charles, Mo., is a materials-handling laboratory which works closely with carbody design specialists. The laboratory's equipment consists of test hoppers, pneumatic handling systems, auxiliary test devices, and equipment for simulating high-temperature and high-humidity conditions encountered in summer service.

● **How they act.** Control checks and tests are made during unloading to evaluate properly the behavior of the lading in the experimental hoppers. Auxiliary equipment enables measurements to be made of material density, moisture content, internal temperature of the material, and pneumatic system air flow, air velocity and static pressure.

Results of laboratory and field service tests are distributed periodically to shippers and railroads. Already, the materials-handling properties of more than 300 commodities have been thoroughly analyzed. Samples of new products are often sent to the Technical Center by manufacturers for analysis of their handling characteristics. Many of these, newly developed, are identified only with a code name or number.

● **Similar properties.** Many commodities tested have similar properties, although they may not be of the same product family. Most grains and feeds and many chemicals, for instance, have a density of 45 to 48 pounds per cubic foot. Recognition of this has enabled the ACF engineers to standardize on four basic car sizes ranging from 3,200 to 5,250 cubic feet (see accompanying table).

The Center Flow of 5,250-cubic-foot capacity on 100-ton trucks, for instance, can be utilized to its full volume and tonnage capacity for plastic powders, kaolin, poultry feeds, and light soda ash, as well as foodstuffs.

"This versatility points up the basic soundness and adaptability of the Cen-

LADING RESEARCH, involving 300 bulk products so far, leads to new car designs. G. E. Reed, ACF research and engineering director and R. L. Coffing, Shippers' sales director, at work.

Center Flows meet diverse demands

Model	3200	3500	4650	5250
Cubic capacity (cu ft)	3,200	3,560	4,650	5,250
Nominal capacity (tons)	100	100	100	100
AAR outline	Plate B	Plate C	Plate C	Plate C
Length over strikers (ft-in.)	39-4¾	43-0	51-1¾	54-7¾
Length inside body (ft-in.)	38	32-4	49-9	53-3
Width (ft-in.)	10-5½	10-7¾	10-7¾	10-7¾
Height (ft-in.)	15-1	15-⅜	15-6	15-6
Compartments	Two	Three	Three	Four
Discharge outlets	Two	Three	Three	Four
Hatches	Four*	Six*	Six*	Six or eight*
Light weight (lb)	55,900	61,500	62,000	68,000

*Alternate—one continuous hatch

products

ter Flow car design which has been proved many times, especially in the last year or two as more industries have asked us about unusual requirements," says Carlson.

● **Cutting the corners.** The basic "roundness' of the Center Flow design is enhanced further in the foodstuff car with special plates welded in each of the four compartments to change the slope angle in the hopper outlet area. Compartment bulkheads are notched near the roof so that adjacent compartments can be loaded alternately through the same hatch by a swivel nozzle.

Six circular 20-inch loading hatches are spaced along the roof center line. Contamination in transit is prevented by gasketed, cast-aluminum hatch covers. The all-welded steel carbody interior has a plastic lining to insure further against the contaminating of the edible products it carries.

● **What goes in . . .** Along with loading hatch arrangements, "outlets can easily make the difference between a serious bottleneck and a smooth materials-handling situation," observes Carlson. Getting the ladings out of ACF Center Flows is precisely engineered to fit the products being handled. "Perhaps our most significant recent technical contribution to materials handling has been the development of the 'fluidizing' outlets that may be used with extremely powdery materials, or with pelletized products," Carlson observes. A new version of this new outlet is used on the foodstuff car—one for each of the four compartments.

This latest design, the "fluidizing butterfly-valve outlet," permits dry-bulk products to be unloaded, either by gravity or vacuum, and the flow may be controlled using either method. The 16-in.-diameter outlet opening is readily adaptable to use with vacuum-pan-equipped pneumatic systems, or with any commonly used gravity unloading boot.

● **Double-walled design.** Like ACF's fluidizing-pneumatic outlet introduced a year ago, the butterfly system employs a double-walled outlet area for each hopper. The inner wall is of permeable stainless steel which permits air to be blown through its microscopic pores to fluidize powdery cargo, but does not allow any product to seep back through. Carlson stressed that the membrane is impervious to contamination. It is easy to clean with water or solvents, and it will not shed lint or fibers into the lading.

Many special outlets

Fluidizing outlets supplemented other discharge systems introduced by ACF-owned Shippers' Car Line during recent years to extend the versatility of the Center Flow car. These earlier outlets were:

—Controlled gravity outlet for between-the-rails unloading;

—Quick-dump gravity for mineral products primarily;

—Adjustable pneumatic, for plastics, chemicals, foodstuffs;

—Combination controlled gravity and adjustable pneumatic.

Still other outlets are in the engineering stage, including some for handling liquefied materials. "The variety of hatches and outlets adds materially to the usefulness of the Center Flow car," Carlson says. "The result is a fleet of mass-produced cars that can be customized for specific markets or commodities."

The self-supporting tubular body of all Center Flows has eliminated the center sill, frequently simplifying the design of unloading systems. ACF engineers say that the inverted pear shape not only facilitates the flow of material to outlets, but insures maximum utilization of carbody cube.

● **Plate C car.** High cube Center Flow cars conform to AAR Plate C outline and are 15½ feet high and 10 feet 7 3/4 inches wide. The 5,250-cubic-foot model is 54 feet 7 3/4 inches over strikers. Its foodstuff version has a light weight of 67,000 pounds.

Growth of traffic in dry-bulk commodities should continue, says Carlson. "Unfortunately, few statistical methods have been devised to measure trends within the bulk-handling boom," he adds. One such source is the ICC Bureau of Economics reports on tonnages of rail-delivered commodities. Of the 262 ICC-listed commodities, ACF considers 46 of them as dry-bulk materials. These account for over 800 million tons annually, with more than half transported in open hopper cars (coal, ore, etc.) There are approximately 300 million tons of dry bulk that need protection against weather and contamination—products transported in general-service box cars or covered hopper cars. In 1955 covered hoppers accounted for about 2% of all freight carloadings; in 1962, 4%; and, at the present, an estimated 6%. ■

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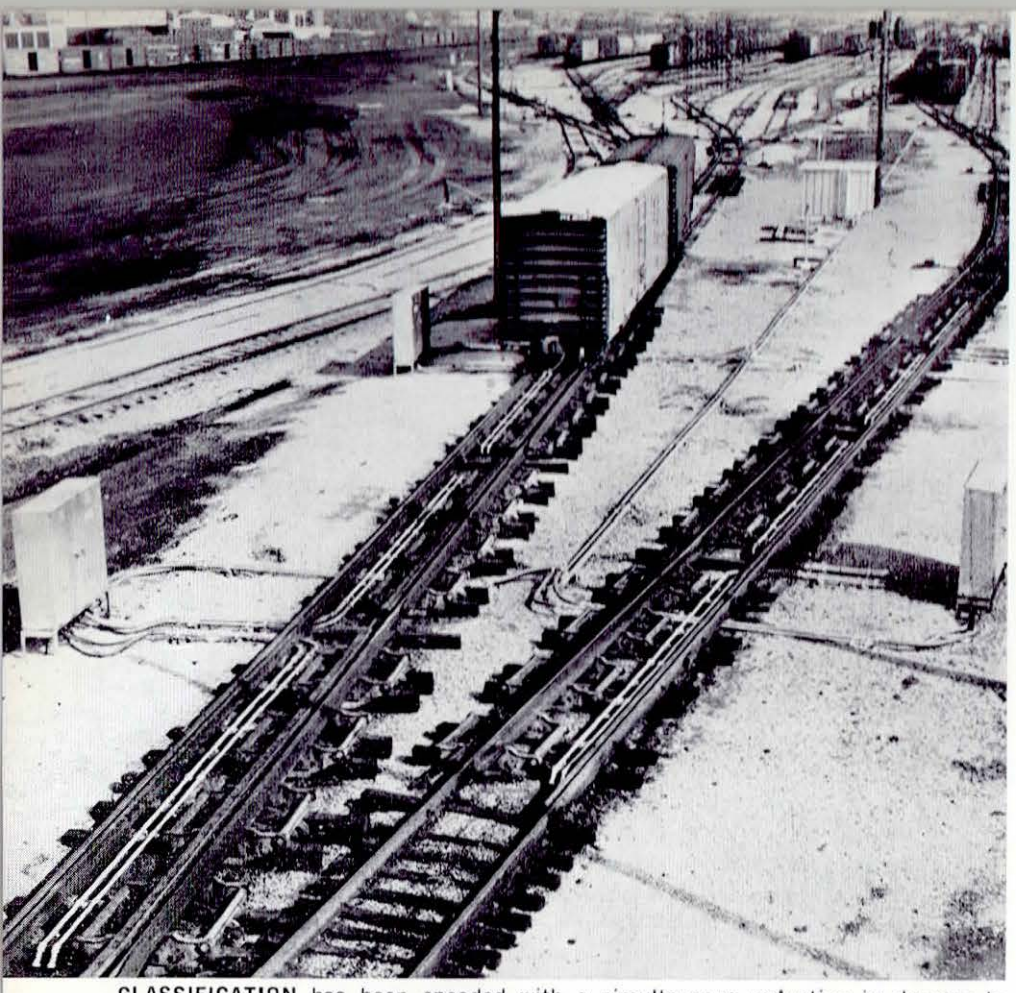


CLASSIFICATION has been speeded with a simultaneous reduction in damage to lading and equipment. PRR priority freights originate at 59th Street.

PRR's Chicago yard cuts L&D in half

Rearrangement of trackage and profile, along with new equipment, produce operation which seems sure to pay off in 2 years.

Loss and damage has been substantially reduced in the Pennsylvania's retarder yard at 59th Street on Chicago's south side. One PRR officer estimates that L&D is down at least 50% since the yard was opened in September 1965. When full data for 1966 operations are in, he adds, L&D may turn out to have been cut by an additional 25%.

• **Changes made.** After the yard was placed in service, speed checks were made by PRR industrial engineers. They measured the speed of cars leaving master and group retarders. The measurements indicated that speed modules in the Abex Corp. retarder speed control system should be changed. The changes led to fewer stalls (cars stopping short) and cut down the number of high-speed impacts on coupling.

Speed checks have been made since then. The latest changes in the speed modules have been to generally increase retarder leaving speeds by about 1 mph.

Skates or inert retarders are not used at the bowl ends of the class tracks. Therefore, PRR practice is to use tie-down men to ride the first cut going into a class track to set the brakes on the cut. The railroad may install inert retarders at some future date.

• **Faster break-away.** In another approach to improve operations, it was determined that a faster breakaway would be desirable at the crest of the hump. To avoid interruption to humping operations, it was decided last year to increase the hump grade and simultaneously flatten the crest profile. To accomplish this, body tracks were raised 13 inches at points just below the master retarders (59th street has two master retarders—one serving tracks 1 through 20 and the other serving tracks 21 through 42).

The improved grade along the hump and the flattening of the crest have speeded humping operations, says a PRR spokesman.

In another move to improve yard operations, two additional ladder tracks were installed at the bowl end of the yard to provide greater flexibility in car handling. For example, it is now possible for three simultaneous switching operations to occur without interference: (1) pull a class track; (2) shove up cars on another class track; and (3) pull a third track of cars for an industry run.

• **Yard air extended.** During the past year the yard air plant facilities have been installed to include the relay tracks and the west end of class tracks 20 to 40. A Van-Air drier was installed to take the moisture condensate out of the air.

Rails Co. propane switch heaters have been installed to keep switches free of ice and snow during winter months.

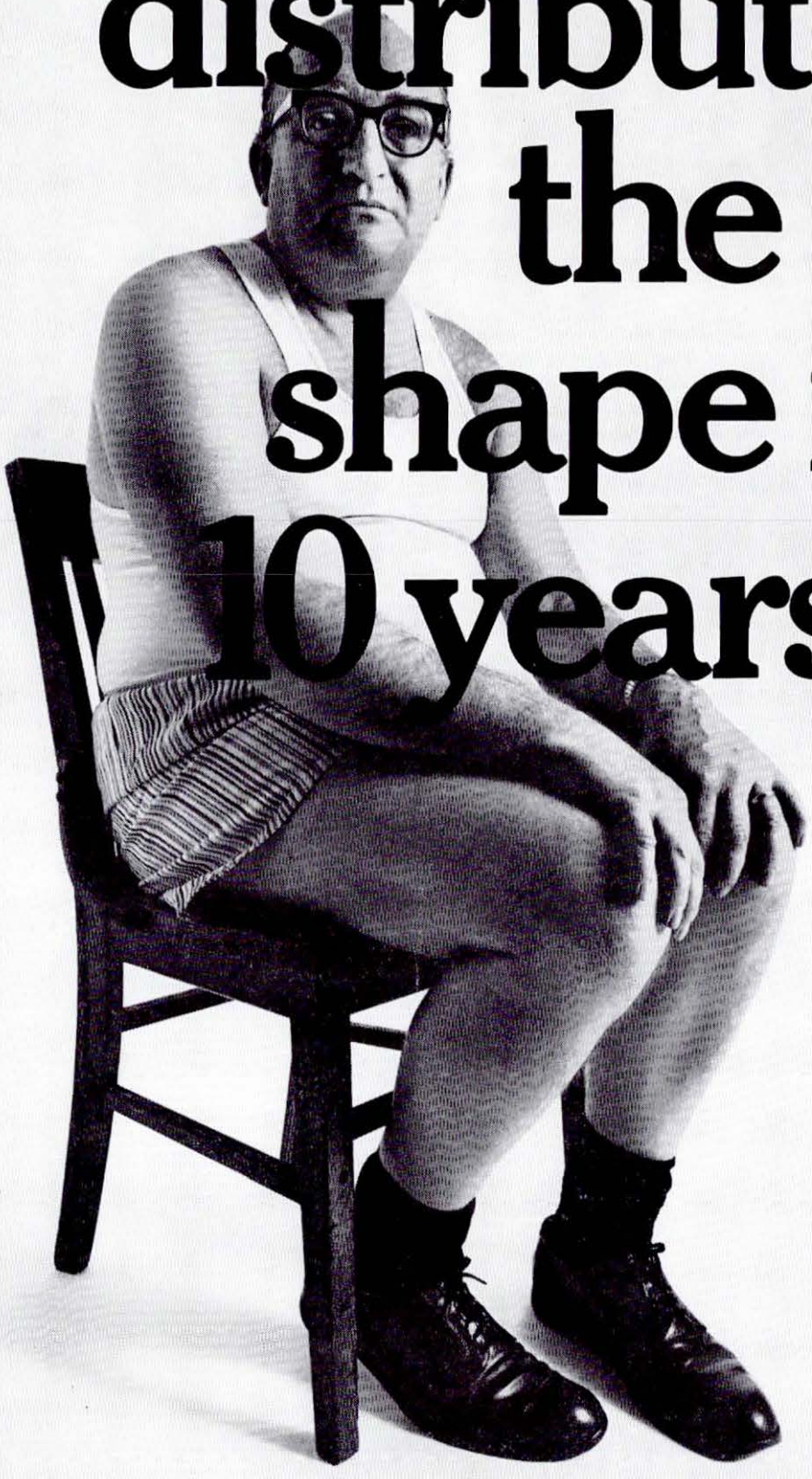
• **Peaks to 1,400 cars.** A humping rate of 1,000 cars daily is being maintained in the yard. The rate sometimes rises to 1,400 cars. Such car handling has greatly improved service, cutting as much as 12 hours off car time in the yard. Formerly, the work at this location was handled by two rider hump yards. The new yard features selective speed controls on the two master and six group retarders (made by Abex Corp.) and Transcontrol Corp.'s automatic switching for route selection.

Generally, classifications are assigned to specific tracks, which results in faster classification of cars. Some changes in track assignments may be made as more tracks are equipped with yard air. The operation so far, say PRR men, has enabled 59th Street to efficiently handle the road's priority freight trains, including the famed Astronauts.

• **Recording operations.** As a means of monitoring operations with a view to making improvements when and where possible, an Esterline-Angus recorder has been installed to record various switching and retarder operations. For example, data is recorded about the routes set up by the retarder operator for automatic switching, the time set up, how many and what routes are stored, and whether the car went to the route set up for it.

The yard was designed to pay for itself in two years, and one PRR officer says that schedule is being met. "At the rate we're going," he adds, "the yard might be a little bit ahead of schedule as to its return on investment." ■

Is your physical distribution in the same shape it was 10 years ago?



Chances are, you have a check-up every year. Well, why not treat your company the same way?

Why not give it a check-up once in a while. A physical distribution check-up. After all, a company's distribution gets out of shape, too.

And that's where our New York Central Physical Distribution Specialists come in.

Their job is to help you with your physical distribution problems.

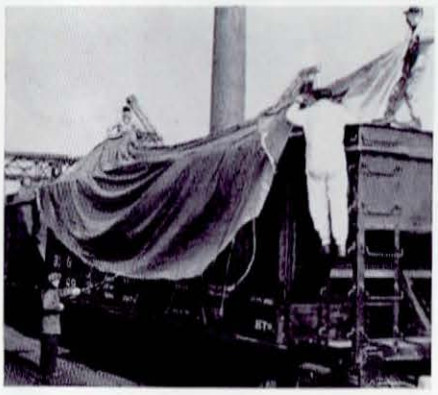
They can help you with plant location and re-location. They can help you reduce transportation and warehousing costs. They can help give you a dynamic, yet practical approach to your company's traffic and material management needs.

If you'd like to have our specialists give your company's physical distribution a check-up (at no cost to you), call your New York Central Freight Sales and Service office.

It could be just what the doctor ordered.

NEW YORK CENTRAL SYSTEM

NEW **PRODUCTS** REPORT

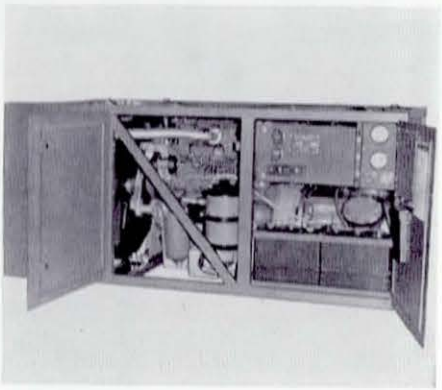


Car Covering (RA-1)

Facilon, a nylon-reinforced fabric, is being used on Reading open hopper cars built for shipping bulk sugar from pier side to refinery to prevent moisture pick-up which causes sugar to cake and crystallize. The 14- x 44-ft covers, manufactured by the Delaware River Canvas Co., are secured in place over specially designed, tent-like frameworks fitted to top of each car. The fabric is said to be extremely strong and tear resistant. *Sun Chemical Corp.*

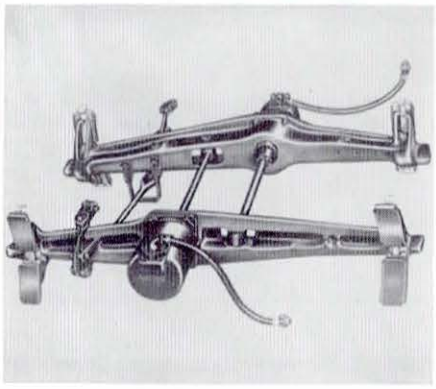
Heating Strip (RA-2)

Slim Electro-Wrap, a 1 3/8-in. wide electrical strip-heating method, handles small-diameter piping down to 3/8 in. (5/8-in. tubing). Heat output of Slim Strip is 6.5 w/ft at 115 volts. A graphitic resistive material provides parallel current paths across width of strip, permitting required lengths to be cut without breaking circuit or affecting per-foot heat output. Flexible strip is said to be impervious to moisture and most chemicals. *Electro-Trace Corp.*



Refrigeration Unit (RA-3)

Control panel of 250C undermount diesel transport refrigeration unit for piggyback trailer applications has only three switches to operate. Fail-safe shut-off turns unit off if low on water or oil, or in case of loss of electrical input. Temperature control is maintained at between −20 and +80 deg. Units available: Model 100 evaporator, wall or ceiling mounted; Perkins Four/99 engine; Mercedes diesel OM636 engine (Model 250 CM). *Transicold*



Truck-Mounted Brake (RA-4)

The Nycopac brake assembly, a braking mechanism for installation in the unit-beam truck, combines the functions of the brake cylinder, brake rigging and brake beams in a compact arrangement so that a single shoe brake is applied to each wheel of the freight car. The unit-mounted cylinders function so that the cylinder push rod pushes directly on one brake beam while the cylinder itself pushes directly on the other beam. The doubling of the piston force by using both the piston-rod thrust and the cylinder reaction permits the use of small cylinders with proper pressure equalization. Assemblies are suitable for use with single capacity AB-10 and ABD-10 brake equipments in combination with Cobra shoes. The B3 beam is suitable for 40- to 100-ton cars with single-capacity brake equipment. In addition to the four brake-cylinder and beam assemblies—two of each for application to each truck—a lever handbrake arrangement is provided on one truck only. Nycopac B3-7½ and B3-8½-in. models are interchangeable with corresponding Wabcopac brake assemblies. *New York Air Brake Co.*

RAILWAY AGE
WEEKLY

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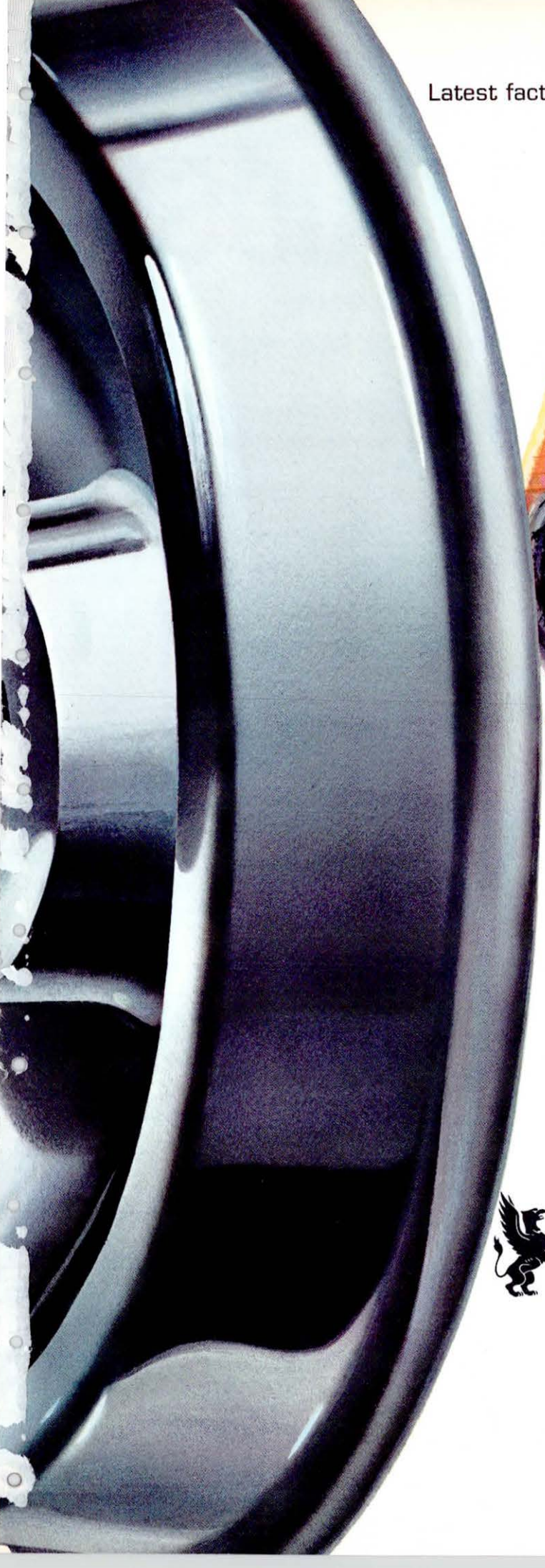

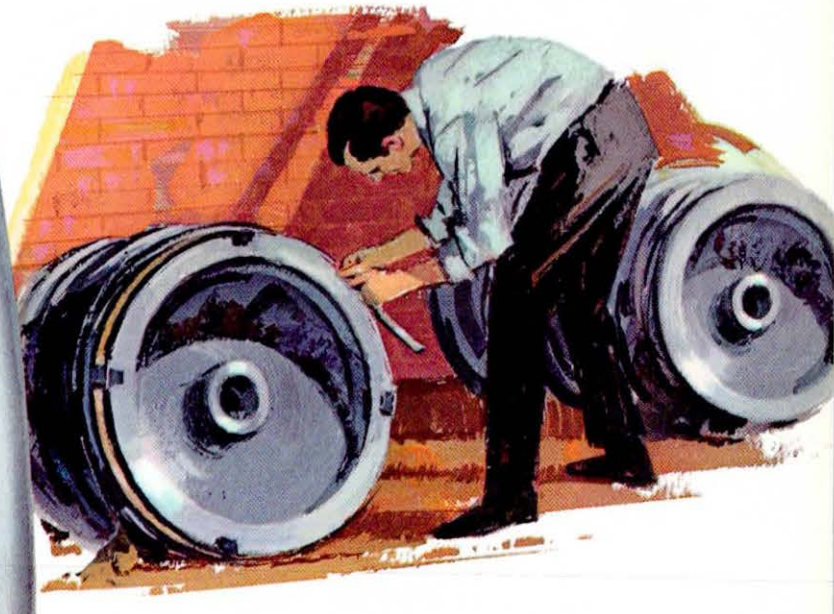

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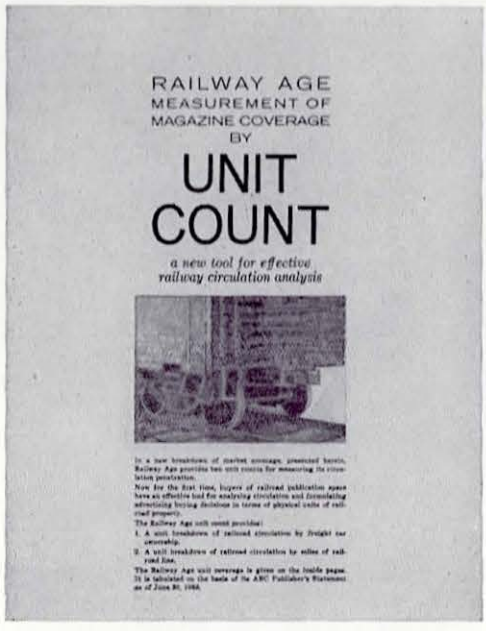
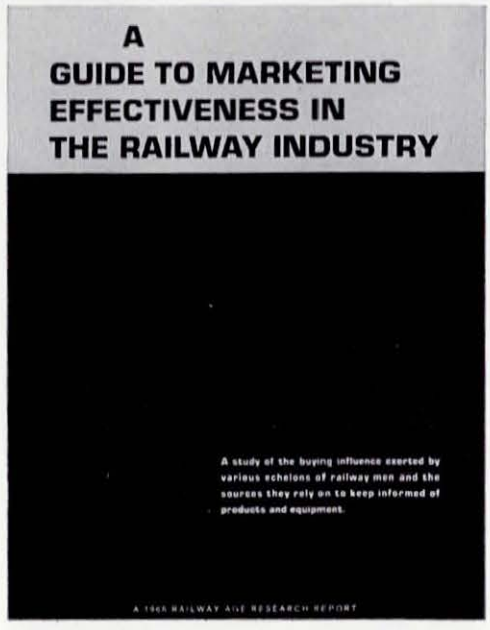


Railway Age now offers advertisers a new measurement of its circulation coverage and penetration, based on two unit counts of railroad property—freight car ownership, and railroad mileage. This new study shows how Railway Age reaches railroad buying power where it is of greatest importance.

It lists Railway Age circulation by 8 groupings of freight car ownership and by the same number of groupings of railroad line mileage. Circulation data for each grouping is presented in the exact occupational classifications shown in the Publisher's ABC Statement.

Available for the first time in the railway industry, this pinpointed analysis should provide a new dimension for the selection of railway advertising media.


A
GUIDE TO MARKETING
EFFECTIVENESS IN
THE RAILWAY INDUSTRY
A study of the buying influence exerted by various echelons of railway men and the sources they rely on to keep informed of products and equipment.
A 1966 RAILWAY AGE RESEARCH REPORT

Now available: A new study of railway buying influences and the sources railway men use to obtain product information. It provides answers to a wide range of questions designed to show *where* and *how* suppliers can best get through to the railroads.

This study should be immensely helpful in planning sales and marketing strategy. It has been obtained through a Simmons-Boardman Marketing Effectiveness Survey personally conducted among 276 management officers and supervisors on 28 Class I railroads and five transit lines.

Outstanding in the results of the survey is the top position occupied by railway magazines as sources of railway product information. These magazines rated high among all nine of the groups of railway men surveyed.

Write for your copies of these studies to Railway Age
30 Church Street, New York, N.Y. 10007—Attention: George Johnson—Reader Service

RAILWAY AGE

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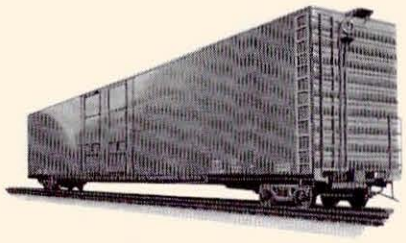

They'll gladly stay on the job with NDH Bearings.

Your freight cars start taking paid vacations the minute they go into the shop for repairs. You're money ahead when you keep them rolling on durable NDH Bearings.

To increase durability, we use only ultra-clean, vacuum-degassed steel in making our bearings. We design rollers for ideal balance of radial and thrust requirements. And our rollers are made with spherical ends for proper inner race contact, and better thrust distribution. We put a phosphate coating on the bearing races to guard against rust, make bearings last longer.

Our extra attention to detail seems to pay off. NDH Bearings have rolled up 2½ billion miles of trouble-free service.

Stop paying your cars for non-productive vacation time. Keep them on the job and on the move with NDH taper freight bearings.

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MARK OF EXCELLENCE

NDH BEARINGS

WATCHING **WASHINGTON** WITH WALTER TAFT

TAFT

LOOMIS ON THE QUI VIVE—President Daniel P. Loomis of the AAR never misses a chance to plug for the railroad industry's basic legislative program. He's as alert as the Californian at the Floridian's funeral. As that story goes, the former recognized the captive audience of mourners as a target of opportunity, and took advantage of the after-prayer lull to say a few words in praise of California and its climate.

Loomis did something like that last year in appearing before Congressional committees to record the railroads' "in-principle" support of the legislation which created the Cabinet-level Department of Transportation. Having made that record, the AAR President hastened to warn that establishment of DOT would not solve the country's over-all transportation problem. He explained that there would remain inequalities and inequities that can be eliminated only by changes in existing provisions of substantive law.

WHAT IT TAKES—Loomis then followed through to advise the Congressional committees that these inequalities and inequities can be eliminated by legislation implementing the railroads' call for four freedoms—from restrictions on competitive ratemaking, from subsidized competition, from discriminatory taxation, and from barriers against operating all modes of transport.

Now, the AAR President has done it again. He has made a like presentation in an eight-page letter to Representative Catherine May (D.-Wash.). The presentation was inspired by a letter Mrs. May received from a constituent who expressed concern about the gradual disappearance of railroad passenger service. Mrs. May had the Loomis letter printed in the Congressional Record. She did so in the hope that it may "shed some much-needed light on what both the railroads and railroad users are up against in this situation, and, perhaps, provide guidance toward meeting this truly national problem."

THE RAMIFICATIONS—The passenger-service problem is bigger than a matter which can be solved by a unilateral determination of railroad management to "do something," Loomis says. He explains that the problem "has its root causes in a wide range of social, economic and government policy sources—and can be dealt with effectively only by a determined attack on an equally wide front." From that text, Loomis works up to his advocacy of the four-freedoms program. And he has other general recommendations, too, including a call for development by government of "sound investment criteria to avoid excessive and uncoordinated promotional expenditures" on transportation facilities for use of railroad competitors.

For passenger-service ills specifically, the AAR President has prescriptions which call upon state and local governments to stop opposing abandonment of "hopelessly unprofitable" passenger trains, and to remove "outmoded 'full crew' laws requiring unneeded manpower under modern conditions of railroad operation." Loomis thinks railroad employees should be willing to cooperate in these areas, because they have "a manifest interest in promoting the operation of passenger trains on a sound economic basis."

SELF-HELP—Meanwhile, the railroads, Loomis promises, will continue to strive for greater efficiency and economy in the operation of passenger service. They will also continue to develop services which have "real economic potential." In the latter connection, the AAR President is thinking principally of services contemplated by the federal government's studies of high-speed ground transportation in heavily-populated corridors. The railroads, he says, think that program "provides a wise approach in ascertaining to what extent travel requirements can and should be met by rail service as an adjunct to our highways and our air lines."

Competing modes will get tougher

TAA Chicago meeting put the spotlight on coming technology.

Would you believe inter-continental barge transportation . . . semi-trailers, mass-produced on a fully-automated production line . . . air freight carried at a direct cost of two cents a ton-mile? Would you believe levels of technological accomplishment from all other forms of transportation which could match the technological performance of railroads and their suppliers during the past 10 years?

Brother, believe. The things people are talking about in all three competitive industries — water, highway and air transportation—aren't dreams. In all cases, they're things that are being done, or are about to be. This is the picture, scene by scene, as sketched at a recent Transportation Association of America conference on the dynamics of transport technology:

- **Bigger, versatile ships.** Within a matter of weeks, Lykes Brothers Steamship Company will ask for bids on three huge, all-purpose, ocean-going ships which could have a profound effect on import-export shipping and on railroad operations (in the East and Midwest immediately, and in other areas, perhaps, later on).

The ships Lykes wants will be able to carry 38 fully-loaded barges or between 1,500 and 1,600 cargo containers, plus about 15,000 tons of liquids in deep-tank space. They'll be able to handle 1.4 million cubic feet of cargo.

Frank A. Nemec, president of Lykes, puts the proposition simply: "The rapid innovation of container service in foreign trade offers a severe challenge to the traditional transportation and industrial complex of the Mississippi Valley and the Gulf States. While bulk cargoes will continue to move by the cheapest form of transportation available, other and more sophisticated types of general cargo which require regularity and frequency of service will, in my opinion, flow to an increasing degree via Atlantic

Coast and Pacific Coast ports—unless and until this region can offer a competitive or superior type of transportation. I think the Lykes Sea-Bee system will help satisfy this need."

The Lykes ships won't have the standard lift-and-fall, crane-oriented loading-unloading systems. They'll have a stern elevator with 2,000-ton-plus capacity; wheeled, hydraulic transporters for moving barges or containers from elevators to deck-storage spaces; and wide-open decks on three levels. Says Nemec: It's a system of magnificent simplicity and tremendous productivity. . . . We expect a fully-laden ship carrying 38 barges can be loaded or unloaded in eight hours."

How about technology and highway transportation? The Interstate Highway System is one factor—but there are others, as Fruehauf Corp. President William E. Grace points out. The trailer-manufacturing industry today could be described as a glorified job-shop—but, Grace hopes and believes, it won't always be that way. And when the advantages of standardization come to the industry, all sorts of other advantages will come along.

● **The highway '70s.** Fruehauf has its own set of forecasts for what's going to be, in the 1970s. And they include such things as uniform, or at least similar, state laws regarding trailer dimensions and weights; higher highway speeds; one-bill-of-lading shipping; trailer-container convertibility; and increased intermodal interchange.

Laying ground work

Grace's company, almost four years ago, set out to plan for conditions like these. Fruehauf, in 1963, set up a $20-million program for research and development not only on equipment but also on manufacturing processes.

The results of that program, today, aren't just on paper—they're evident in such areas as production: Fruehauf, over the next year and a half, will sell some 6,000 trailers on a standardized design from an automated plant; they'll be virtually identical to trailers produced in other plants, but they'll be produced on a no-hands line and they'll be sold at the lower costs the company projects for this kind of automated production.

Fruehauf's aim is simple: The company wants to know if the trucking industry — and this, obviously, also embraces major operators and users of piggyback—will go for standardization, instead of job-shop practices. Savings are available to both builder and buyer—and, within a year or two, it should be known whether the trucking industry is ready for what shapes up as a highway version of the highly-successful PS-1 standard box car which Pullman-Standard made so popular a few years back.

Finally, how about technology aloft —where airlines set new passenger-traffic records each year, and where air-freight business seems to be always on the verge of great growth?

A. Carl Kotchian, executive vice president of Lockheed Aircraft Corp., sees passenger-miles continuing to pile up at a high rate—but he also sees air freight really coming into its own in the 1970s. His prediction: "Air-cargo traffic measured in ton-miles will exceed passenger traffic in less than 10 years."

● **Pentagon aid.** One of the major factors in air-freight growth, without much doubt, will be equipment developments stemming from military programs. Lockheed, Boeing and Douglas all participated in the recent Air Force competition for a heavy-logistics transport design. As Kotchian points out, "although Lockheed won, all three companies gained from the design and testing."

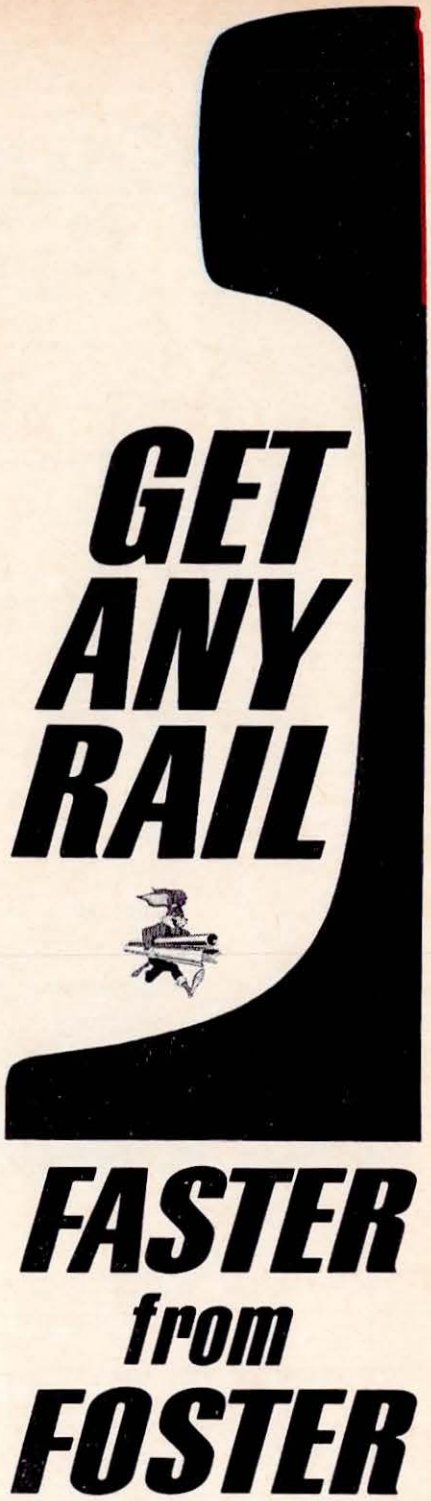
Lockheed's military C-5A is not a wildly futuristic aircraft which will be years on the drawing board. It's scheduled to fly within 18 months.

In the military version, Kotchian notes, the cargo compartment "is twice as long as a bowling alley. You could get six Greyhound Scenicruiser buses inside." With certain engineering changes in the plane, however, cargo capabilities can be improved still further, and the result will be Lockheed's L-500 commercial cargo transport. This plane, Kotchian says, 'could carry 165 tons. Storage area on three decks is the equivalent of eight standard railroad box cars."

How much demand will there actually be for planes like these? It's Lockheed's belief that "there will be a large market for cargo planes of this size in the 1970s. Today's best jet produces cargo transportation at approximately four cents per ton-mile direct operating cost. This plane can cut the cost in half, to two cents a ton-mile."

It remained for William T. Taylor, chairman of ACF Industries, to relate all of this to the railroad outlook—and Taylor came up with a bullish forecast which recognized both the potential for further technological improvement and the need for revision of public policies covering transportation.

Said ACF's chairman: "You may be sure that the independent carbuilding and car-leasing companies will do their part in the areas of their competence to make the improved position of the railroads a real and abiding fact." ■



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George H. Rehm
Burlington

Herbert W. Blank
C&O

PEOPLE

ASSOCIATION OF AMERICAN RAILROADS.—C. P. Safrit, assistant chief accountant, promoted to chief accountant, succeeding **Lawrence M. Baskin,** who retired Jan. 31, after nearly 43 years in the railroad industry.

ATLANTA & WEST POINT—WESTERN OF ALABAMA—GEORGIA.—J. T. McElhinney, general agent at Memphis, Tenn., retired Jan. 1, after a career of over 50 years. **Hardy S. Johnson,** general agent at Newnan, Ga., retired after a career of more than 48 years.

BALTIMORE & OHIO.—James C. McAlarney, assistant terminal trainmaster, Willard, Ohio, appointed terminal trainmaster, Lorain, Ohio. **Raymond L. Myers,** transportation engineer, Baltimore, appointed terminal trainmaster, Willard. **Ronald R. Hosmeyer,** terminal trainmaster, Akron-Chicago Division, Willard, named supervisor of transportation, Pittsburgh, Pa.

BURLINGTON.—Gene A. Davidsmeyer named senior financial analyst, Chicago. Mr. Davidsmeyer was formerly manager of cost accounting, **Campbell Soup Co.,** Salisbury, Md.

George H. Rehm, general freight traffic manager, named assistant vice president-rates and divisions. **Fred O. Eschenbrenner,** district freight and passenger agent, Quincy, Ill., appointed district sales manager, Kansas City. **Dwight K. Ehrman,** industrial marketing analyst, Chicago, becomes sales manager, Kansas City. **Herman L. Lausterer,** general agent, Kansas City, appointed sales manager, Quincy. **Robert J. Havlovic,** city freight agent, Minneapolis, and **Oberlin K. Minder,** chief clerk, Lincoln, Neb., named sales representatives, St. Paul. **Robert P. Cassin,** traveling passenger agent, St. Paul, advanced to division passenger agent, LaCrosse, Wis. **Orvan E. Stevens** named director of terminal procedures and systems, Chicago. He was formerly general superintendent, **Fort Worth & Denver,** Houston.

CHESAPEAKE & OHIO.—Herbert W. Blank, regional sales manager, Chicago, appointed general sales manager, Cleveland (RA, Feb. 6, p. 31). Mr. Blank replaces **Charles W. Campbell,** elected vice president for merchandise freight sales (RA, Dec. 12, 1966, p. 47).

CHICAGO & NORTH WESTERN.—D. J. Fliss appointed assistant vice president-data processing services; **E. F. Shufeldt,** assistant to vice president-systems and information services; **W. P. Allman,** director-applied systems research; **J. F. Resek,** senior analyst-scientific

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computer application.

E. S. Spafford named general car inspector-system, Chicago. **A. J. Curcio** appointed district general car foreman, Proviso, Ill.

GREAT NORTHERN.—**A. A. Ledegar** appointed assistant vice president, accounting department, succeeding **Walter N. Norris,** who retired Jan. 31. **G. A. Richardson,** senior assistant comptroller, advanced to deputy comptroller. **R. F. Garland,** auditor, named assistant comptroller. **B. L. Behler,** assistant auditor, succeeds Mr. Garland.

Raymond F. Schwehm, district passenger agent, Chicago, and **O. W. Pierce,** general agent, passenger department, Kansas City, Mo., retired Jan. 31. Mr. Schwehm's successor is **Hugh L. Gibson,** district passenger agent. Mr. Pierce is replaced by **J. J. Springer,** who will retain his title of traveling representative. **J. K. Cutforth,** regional sales manager, Seattle, named director, special projects, St. Paul. Other members of the unit are **V. A. Opsahl,** manager, service and equipment, and **T. N. Hackney,** manager of pricing, East of Montana, who have been named managers; **K. S. Bagley, Jr.,** assistant director market research, and **E. E. Nelson,** assistant to manager, pricing, appointed assistant managers. **W. C. Hageman,** district sales manager, Minneapolis, becomes regional sales manager, and manager, forest and paper products, Montana and West, Seattle, to replace Mr. Cutforth. **A. L. Strom,** sales manager, Detroit, succeeds Mr. Hageman, and in turn is replaced by **P. C. Ivory,** sales manager, Portland, Ore. Mr. Ivory's successor is **B. E. Waugh,** transferred from Eugene, Ore. **C. J. Speakes,** traveling sales representative, Seattle, replaces Mr. Waugh. **C. D. Merk,** assistant to regional sales manager, replaces Mr. Opsahl. **C. J. Hockaday,** assistant to the vice president-staff, named manager, pricing, St. Paul. **M. H. Karl,** assistant manager, grain and grain products, succeeds Mr. Hockaday, and in turn is replaced by **David L. Henderson,** formerly traffic manager, **Bay State Milling Co. R. P. Reed** and **M. H. Greenleaf,** regional sales managers, St. Paul, retired Dec. 31. **M. V. Schoonover,** manager coal and coke, St. Paul, replaces Mr. Reed as regional sales manager and manager-perishables and food products. **R. C. Wentz,** assistant director, industrial and agricultural development department, succeeds Mr. Greenleaf as regional sales manager and manager-construction projects and allied materials. Mr. Schoonover's successor is **R. W. Morrison,** sales manager, Seattle, who becomes manager coal and coke and manager forest and paper products, Montana and East. Mr. Morrison's successor is **L. A. Richardson,** sales manager, Grand Forks, N.D., who in turn is replaced by **L. J. Eret,** transferred from Fargo, N.D. **J. R. Peterson,** traveling sales representative, Grand Forks, is Mr. Eret's successor. Mr. Peterson is replaced by **L. J. Brokke,** sales representative, Grand Forks, who in turn is succeeded by **R. E. Curtis,** chief clerk, Grand Forks. **R. W. Johnson,** traveling sales representative, Cleveland, becomes sales manager there, to succeed **M. M. Cynkar,** appointed sales representative, Buffalo, N.Y. **P. D. Haertel,** sales representative, Milwaukee, succeeds Mr. Johnson, and in turn is replaced by **G. H. Kipka,** chief clerk, Milwaukee.

W. L. Tilton, industrial development agent, St. Paul, named assistant director, industrial development. **B. D. Rasmussen,** industrial and agricultural development agent, replaces Mr. Tilton, and in turn is replaced by **Nick Blazovich,** assistant to director, industrial and agricultural development department.

NORFOLK & WESTERN.—**Howard Odom,** assistant general manager, Lake Region, Cleveland, appointed manager personnel, Roanoke, a new position. **Joseph R. Neikirk,** superintendent Fort Wayne division, succeeds Mr. Odom at Cleveland. **George W. Gearhart,** superintendent, Norfolk terminal, named assistant general manager, Atlantic Region, Roanoke. **C. W. Dod, Jr.,** assistant superintendent, Norfolk terminal, succeeds Mr. Gearhart. **Paul E. Stitt,** Norfolk division trainmaster, Roanoke, appointed assistant superintendent, Chicago, succeeding **Edward F. Murry,** who replaces Mr. Neikirk at Fort Wayne. **William B. Tanner,** Norfolk terminal's road foreman of engines, named assistant superintendent there.

Edward A. Manetta, manager motive power and equipment, Roanoke, promoted to general manager motive power and equipment there, succeeding **Clarence E. Pond,** retired

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after 44 years with the N&W. **R. R. McDaniel** appointed manager motive power and equipment—locomotive, and **C. S. Patton, Jr.**, named manager motive power and equipment—car, new positions at Roanoke. Mr. McDaniel was formerly superintendent, locomotive department, and Mr. Patton was assistant manager motive power and equipment. **Donald S. Haga**, general foreman, locomotive department, succeeds Mr. McDaniel with the title of assistant manager, motive power and equipment—locomotive. **Glenn A. Minnix**, general foreman, Shaffers Crossing, Roanoke, replaces Mr. Haga. **W. A. Faris**, superintendent car department, appointed assistant manager motive power and equipment—car. **Roy E. Thompson**, mechanical supervisor—car, named assistant manager motive power and equipment—car. **R. S. Woodson**, supervisor lubrication—car, promoted to succeed Mr. Thompson. **Richard J. Sarver**, supervisory gang leader, replaces Mr. Woodson.

Other appointments at Roanoke: **R. L. Brown** and **C. S. Jensen**, market research analysts; **W. E. Voltz**, market analyst; **C. H. Ware**, manager—marketing; **W. E. Murphy**, assistant director—marketing; **Virgil S. Holloway**, budget analyst; **Redmont T. Adams, Jr.**, assistant budget analyst; **George W. Ruff**, office manager to vice president—traffic; **Leighman E. Hawkins**, freight commerce manager; **Edward H. Stewart, Jr.**, assistant freight commerce manager; **J. W. Elliott**, assistant manager equipment; and **H. E. Giles**, assistant to manager equipment.

A. F. LeGros named sales manager, Philadelphia, succeeding **D. W. DeVore**, promoted.

READING.—Joseph K. Herman, assistant purchasing agent, Philadelphia, Pa., promoted to purchasing agent there, succeeding **Russell W. Tomlinson**, who retired Feb. 1, after more than 47 years with the Reading. **Ernest H. Follweiler**, assistant to purchasing agent, succeeds Mr. Herman. **John C. Gantt** appointed assistant to purchasing agent and **George J. Young** named manager of materials.

R. E. Triplett appointed to the newly created post of superintendent of development and training. Prior to joining the Reading, Mr. Triplett was general manager, Precision Engineering Co., Mt. Vernon, Ill. He previously served the **Louisville & Nashville.**

REA EXPRESS.—Daniel J. Kerrigan, director of business development, appointed assistant vice president—marketing. **Horace A. Rice** named director of national accounts. **John F. Mahon** appointed director—pricing, and **William J. Roche**, assistant director—pricing. **H. Robert Glavas** named marketing manager, Mississippi Valley Region.

Warren R. Henry
Santa Fe

Lawrence Cena
Santa Fe

Charles L. Cogswell
GATC

George E. Evans
Am. Hoist & Derrick

ROCK ISLAND.—The station service department has been expanded, renamed the operating services department, and given broader responsibilities. **Warren C. DeVries**, superintendent, station service, will head the new department as manager, operating services. **William J. Pasta** becomes assistant manager. He was formerly superintendent data processing. The department is composed of four sections: station service, **W. A. Dennis**, supervisor; yard and terminal service, **J. D. Ditto**, supervisor; data processing operations, **J. E. Dwyer**, supervisor; operating services, **C. E. Grogan**, supervisor.

SANTA FE.—Warren R. Henry, assistant to the vice president-operations, Chicago, appointed assistant vice president-operations. **Lawrence Cena**, assistant general manager, Topeka, Kans., replaces Mr. Henry, and in turn is succeeded by **L. P. Heath**, special assistant to the vice president-operations.

SEABOARD.—Harold M. Saunders, agricultural-traffic agent, Orlando, Fla., retired Jan. 31.

SOUTHERN.—John F. Dearnaley appointed assistant comptroller, Atlanta, Ga. Mr. Dearnaley was formerly with Robert Heller Associates, management consultants.

SOO LINE.—George W. Guthrie, superintendent, safety, freight-damage and fire prevention, named to the new position of director, corporate planning. **Russell H. Kapitan**, supervisor, loss and damage, appointed manager, safety, freight-damage and fire prevention.

SOUTHERN PACIFIC.—John Serowchak named assistant general fire prevention engineer, San Francisco.

UNION PACIFIC.—Robert A. Bressler appointed general traffic agent, Santa Monica, Calif., succeeding **Walton A. Cheney**, who retired Jan. 31, after more than 40 years of continuous service with the UP.

SUPPLY TRADE

Charles L. Cogswell, assistant director of marketing, **General American Transportation Corp.**, has been appointed director of marketing services. He assumes the responsibilities of **John P. McFadden**, a vice president, who has retired. Mr. McFadden will continue to serve the company in a consulting capacity on the West Coast.

George E. Evans has been named manufacturing manager, St. Paul, Minn., plant, **American Hoist & Derrick Co.** He was formerly associated with **Waterous Co.**, a wholly owned subsidiary of American Hoist.

Leo M. Waszak has been named service engineer, **American Steel Foundries**, Chicago. He was formerly materials technician, Product Engineering Department, Hammond Works.

Erwin L. Beidler has been appointed marketing manager, Comfort Cushioning Division, **Toyad Corp.**, Latrobe, Pa. Mr. Beidler was formerly with ALCOA in Wichita, Kan.

Dr. Oscar J. Horger has been elected vice president of research and development, **Brenco, Inc.**, Petersburg, Va. Dr. Horger, the holder of many patents and the author of more than 40 technical papers on bearing and axle design, had spent his entire business career with **Timken Roller Bearing Co.**, which he joined in 1923.

Erwin L. Erfert, senior project engineer, **Abex Corp.**, New York, has been appointed assistant chief engineer, wheel products group.

Fred Coleman has been appointed sales manager, Transportation Control Systems, Commercial Electronics Division of **Sylvania Electric Products Inc.**, subsidiary of General Telephone & Electronics Corp., New York.

OBITUARY

Lawrence T. Ferguson, 60, system engineer of track, **Union Pacific**, Omaha, Neb., died Jan. 18 in St. Lukes Hospital, Denver, Colo.

S. G. Raber, 74, retired signal engineer, **Nickel Plate** (now Norfolk & Western), died Jan. 27 at Cleveland, Ohio.

David B. Sweeney, 55, assistant vice president in charge of coal traffic, **Illinois Central**, died Feb. 2 at his home in Flossmoor, Ill.

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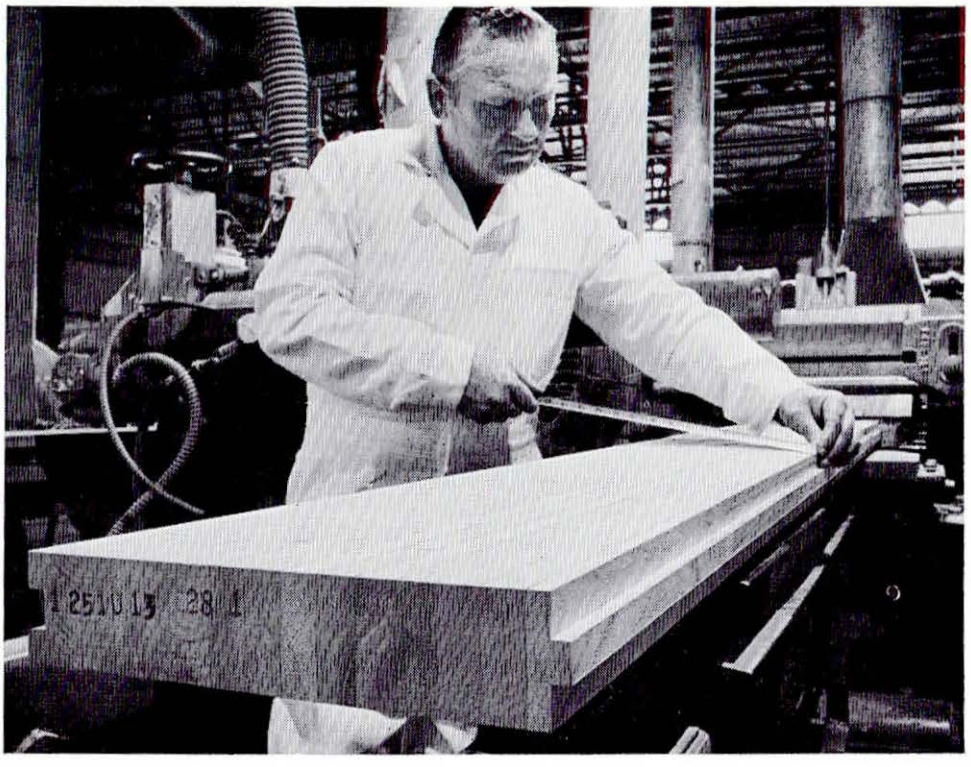

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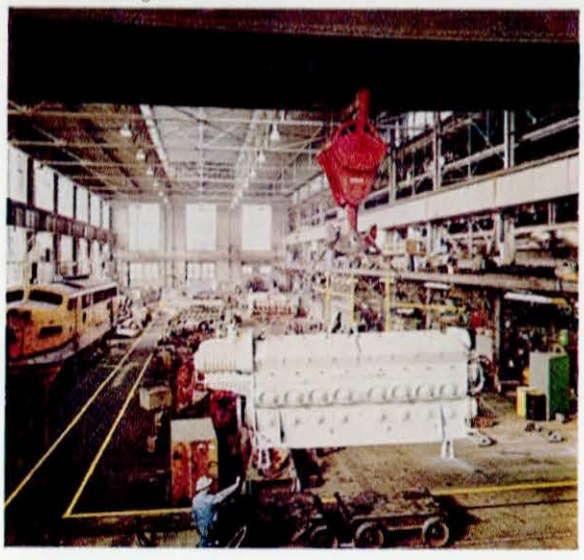

Steel ribs for constructing or repairing cars and for other structures in the yard and on the right-of-way—CF&I Structurals, Bars and Shapes.

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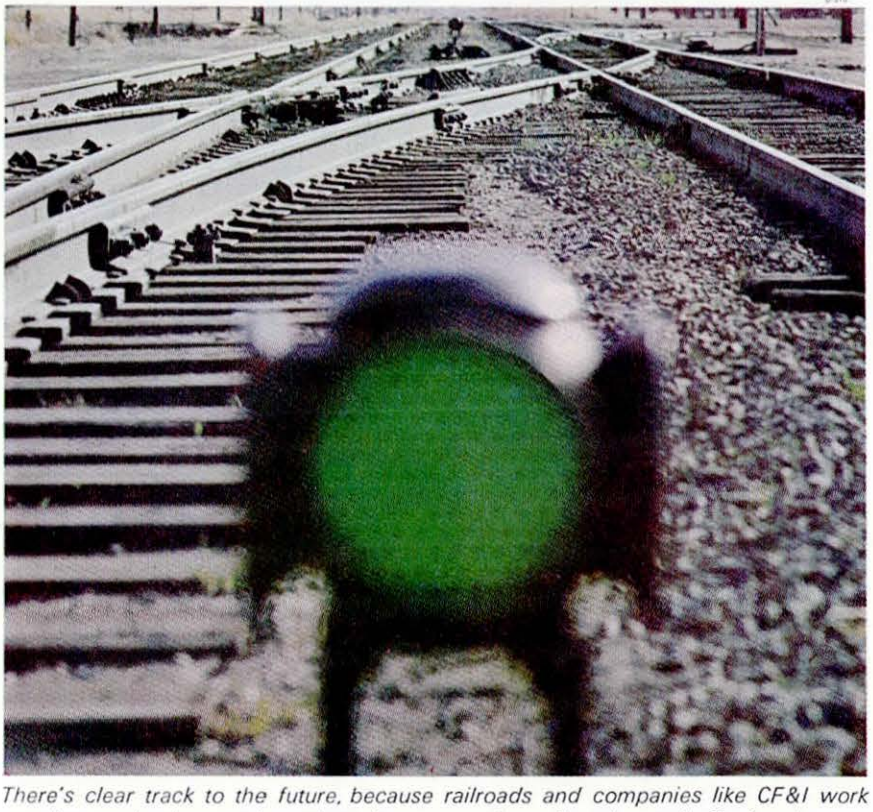

There's clear track to the future, because railroads and companies like CF&I work together to develop steel products for progressive railroad growth. During the past eighty years, CF&I has served western railroads by producing and improving steel products like the ones described on the next page—CF&I rails and accessories and other essential products for today's railroads—part of CF&I Service in Steel.

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LUTHER MILLER

AS THE EDITOR SEES IT...

NO TIME FOR A TIME-OUT — Would the Green Bay Packers call a time out in the middle of a drive to the goal line? William T. Taylor, chairman of ACF Industries, doesn't think so—because "they know that it is fatal to kill momentum." Mr. Taylor wonders if railroads won't jeopardize their own winning season if they call a "time out" on freight-car orders during an unprecedented peacetime traffic boom.

"I doubt that any railroad man will disagree that the new special purpose cars are the answer to attracting new ladings and recovering business lost to other forms of transportation; that their return on investment is higher than it was ever dreamed a freight car could produce; and that every day of delay in supplying a special-purpose car to meet a customer's need slows the momentum of the movement of shipping to the rails," Mr. Taylor told the National Transportation Institute in Chicago.

Yet, he said, from present indications there will be a downturn in car orders in the last half of '67. This is because some railroads, presumably, will withhold orders pending the return of the now suspended 7% investment tax credit.

SAME GAME, NEW RULES—"Certainly, foregoing a 20% return on an investment in new special-purpose cars is a costly way of demonstrating that the removal of the tax credit was wrong to begin with," argued the ACF chairman. "That is why, in spite of the present stalemate in ordering, I am hopeful that buying soon will be resumed because of the very clear economic justification for getting these cars on the tracks."

In all fairness to railroads, it must be pointed out that even the Green Bay Packers might have cried uncle if they had suffered the kind of penalty that has been meted out to railroads—if (in the words of Illinois Central President W. B. Johnson) they had found the rules changed in the middle of the game.

We share Mr. Taylor's hope that railroads will keep their eyes not on the yardage lost but on that still to be earned, and get on with the game. But if railroads—and the shipping public—are to have another winning season, they are going to need a clearer and fairer set of rules than the Administration has so far provided.

1990, AS M.I.T. SEES IT—"We feel," says M.I.T. Report No. 8, on page 4, "that the economic rationale of the [transit] user is most susceptible to decreases in door-to-door travel time, and to decreases in uncertainty."

This is the M.I.T. way of saying that people want to get where they're going faster, and on time. The reader who isn't put off by such M.I.T.-ese will find some moderately interesting—and immoderately far-out—reading in Report No. 8, which carries the main title, "Project Metran," the explanatory sub-title, "An Integrated Evolutionary Transportation System for Urban Areas," and the further explanation, "Interdepartmental Student Project in Systems Engineering at the Massachusetts Institute of Technology, Spring Term, 1966" (262 pp., the M.I.T. Press, Cambridge, Mass. 02142, $7.50).

The transit system contemplated by this study would have us all, by the year 1990, getting around in "auto-like" vehicles on computer-controlled guideways.

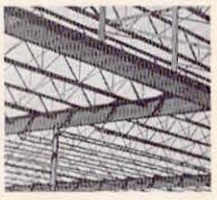
The ultimate vehicle would be a "Genie." The user could dial for a "Genie" through his telephone exchange—or he could walk down the block to a "call pole," rub it, "and a Genie would immediately appear."

What would happen to existing rapid-transit lines? They would all be neatly paved over.

The M.I.T. study was supported by grants from, among others, a large automobile producer.

Over the years, the CF&I rail brand has come to be known as the mark of a company that provides steel products to clear the way for railroad progress—new sections (136, 119 and 106 lb.), oxygen steel rail, Hi-Si® (high silicon) rail, and accessories. Today, CF&I is working with BARTD* to develop rail and accessories for rapid transit systems, another innovation to stimulate railroad growth.

**Bay Area Rapid Transit Dist., San Francisco, Cal.*



A strong steel skeleton of CF&I structurals supports building projects to meet railroad needs for the present and the future. Wide flange, I & H beams, channels, angles, bars, and reinforcing bars are available from CF&I, the only manufacturer rolling wide flange beams west of the Mississippi.

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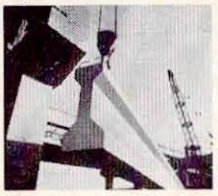

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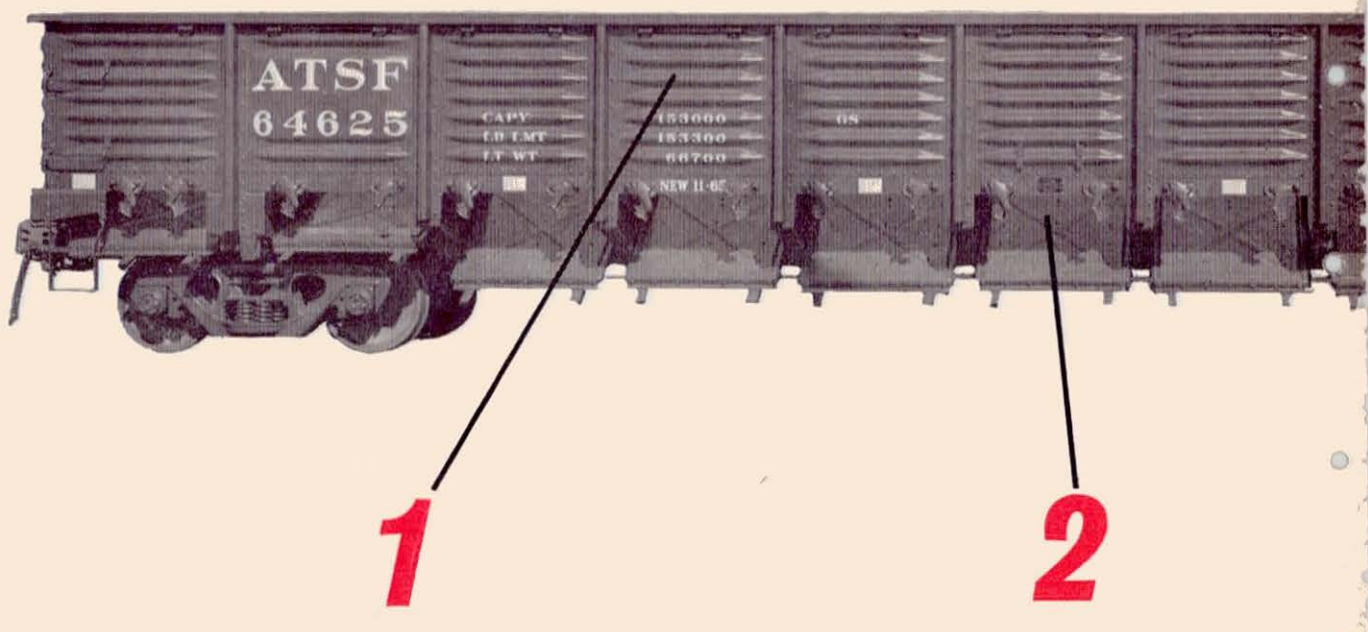

Quite a few. On this new gondola car, built for the Santa Fe by Greenville Steel Car Company, Standard components used were: **1.** the corrugated sides; **2.** the drop doors; **3.** the corner posts; **4.** the coupler release rigging; **5.** the Standard coupler centering device, and **6.** the dreadnaught steel ends. Oh, yes—and some parts you don't see, like the lading bumpers.

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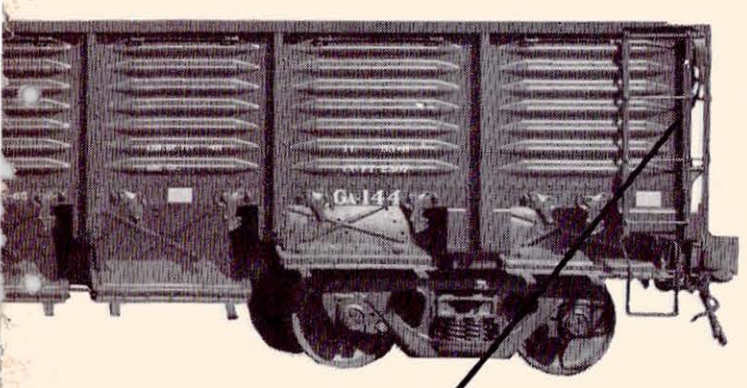

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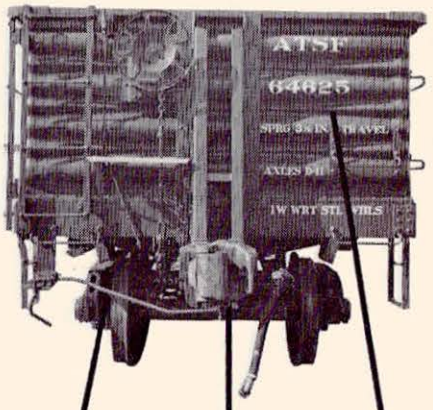

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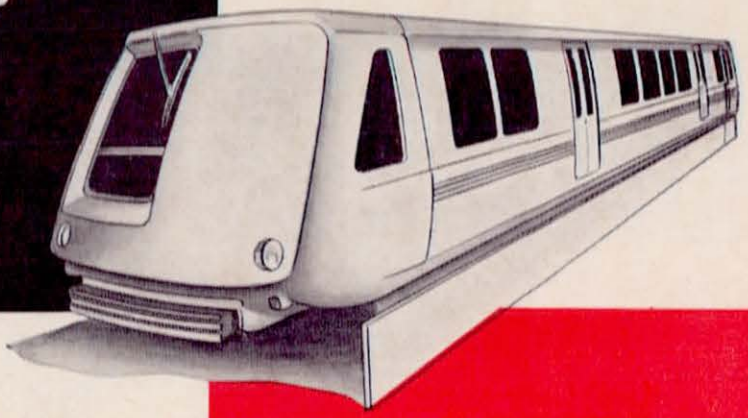
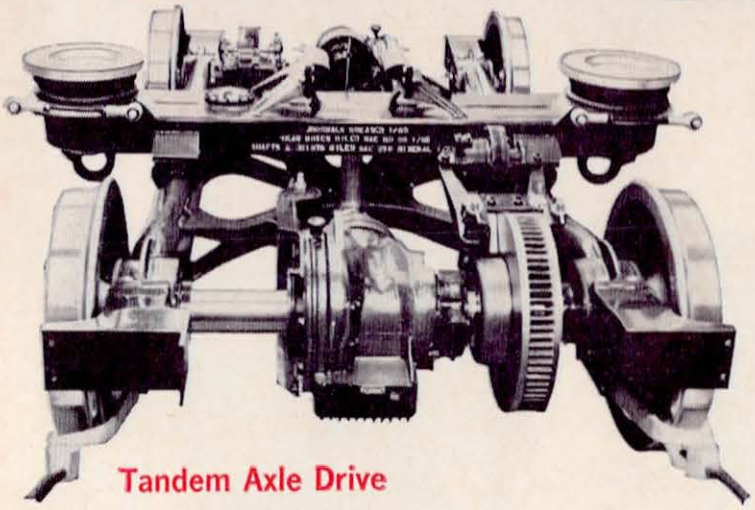


DRIVES



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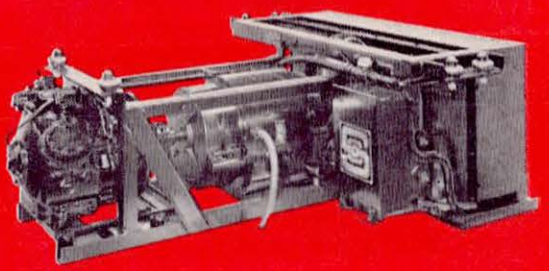

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MARKET OUTLOOK

Carloadings

Loadings of revenue freight in the week ended Feb. 4 totaled 519,679 cars, the Association of American Railroads announced on Feb. 9. This was a decrease of 6,958 cars, or 1.3%, compared with the previous week; an increase of 32,062 cars or 6.6 %, compared with the corresponding week last year; and an increase of 18,493 cars, or 3.7%, compared with the equivalent 1965 week. Ton-miles generated by carloadings in the week ended Feb. 4 are estimated at 13.8 billion, an increase of 10.3% above the corresponding week of 1966, and 15.5% above the 1965 week.

REVENUE FREIGHT CARLOADINGS

For the week ended Saturday, Feb. 4

District	1967	1966	1965
Eastern, including Allegheny and Pocahontas ..	201,953	185,245	203,480
Southern	118,676	99,433	102,717
Total Eastern and Southern Districts	320,629	284,678	306,197
Northwestern .	57,249	60,545	57,662
Central Western	102,425	105,706	102,613
Southwestern .	39,376	36,688	34,714
Total Western Districts	199,050	202,939	194,989
Total All Roads	519,679	487,617	501,186
Commodities:			
Grain and Grain products	47,696	53,418	44,078
Livestock	1,046	1,357	1,721
Coal	107,628	91,492	96,193
Coke	7,093	7,920	8,616
Forest Products	40,825	35,975	36,499
Ore	17,314	14,984	14,934
Merchandise l.c.l.	4,852	6,283	9,883
Miscellaneous .	293,225	276,188	289,212
Feb. 4	519,679	487,617	501,186
Jan. 28	526,637	513,503	527,826
Jan. 21	528,264	536,387	522,746
Jan. 14	542,193	544,556	532,367
Jan. 7	451,457	508,282	531,058
Cumulative total, 5 weeks	2,568,230	2,590,345	2,615,183
Estimated revenue ton-miles (billions) 5 weeks	57.3	65.9	62.1

PIGGYBACK CARLOADINGS.—U.S. piggyback loadings for the week ended Jan. 28 totaled 20,714 cars, carrying 33,373 trailers, compared with 19,776 cars, carrying 33,264 trailers, in the corresponding 1966 week. Loadings for 1967 up to Jan. 28 totaled 83,144 cars, carrying 132,722 trailers compared with 76,933 cars, carrying 125,645 trailers, in the corresponding period of 1966.

IN CANADA—Carloadings for the seven-day period ended Jan. 21 totaled 71,141 cars, compared with 73,915 for the previous seven-day period, according to the Dominion Bureau of Statistics.

	Revenue Cars Loaded	Totals Cars Rec'd from Connections
Totals for Canada		
Jan. 21, 1967.....	71,141	24,299
Jan. 21, 1966.....	73,809	24,957
Cumulative Totals		
Jan. 21, 1967.....	205,238	68,969
Jan. 21, 1966.....	203,312	69,133

FREIGHT TRAIN CARS

► *Erie Lackawanna.*—Ordered 250 70-ton open-top hopper cars from Bethlehem Steel for April delivery; 50 65½-ft gondolas from Greenville Steel Car for delivery in June; 150 specially-equipped box cars for June delivery from ACF; and 25 52½-ft bulkhead gondolas from Ortner for delivery in July. Within the next few weeks, the road is planning to order 50 cushion-underframe 60-ft box cars and 50 100-ton, 2,600 cu ft covered hoppers.

LOCOMOTIVES

► *Erie Lackawanna.*—Ordered 20 3,600-hp diesel-electric locomotives from EMD for delivery in June.

CAPITAL EXPENDITURES

► *Southern Pacific.*—Spending plans for 1967 include the purchase of about 3,400 freight cars, costing approximately $61 million; 130 locomotives, costing more than $34 million, and a larger number of highway trucks and trailers. Construction of a new $22-million, 78-mile rail line from Palmdale to Colton, Calif., is ahead of schedule. It is expected to be opened this summer. The line will provide a 46-mile shortcut for SP trains.

NEW FACILITIES

► *Bessemer & Lake Erie.*—Purchased two hot box detectors from Servo Corp. for installation at Filer and Culmerville, Pa. The units are expected to be operational by late April. Purchase price plus installation will total about $52,000.

► *Canadian National.*—Work is currently under way on a multi-million dollar project involving the construction of a two-mile railroad tunnel and bridge designed to relieve congestion and handle expected increases in rail tonnage in Vancouver harbor. The tunnel will connect with a bridge to be built across the Second Narrows. The Port Mann Yard will be enlarged to twice its present capacity, making it the main railroad yard serving the greater Vancouver area.

► *Metropolitan Atlanta Rapid Transit Authority.*—Awarded $554,000 worth of preliminary engineering contracts prior to building a rapid transit system. Biggest single contractor was joint-venture consultant Parsons Brinckerhoff-Tudor-Bechtel, which was authorized to phase in some design work; the program will finance completion of preliminary engineering on extensions of the North-South line; all planning and preliminary engineering on the East-West line. Other contracts were for a corridor impact study and study of impact of rapid transit on the Atlanta Transit System, a bus operator (RA, Jan. 2/9, p. 39).

FOREIGN

► *India.*—Alco Products has received from the Indian Railways an order for 21 diesel-electric locomotive units costing about $3.5 million. The 1,050-hp units, scheduled for delivery in the second half of 1967, will be designed especially for switching and transfer service. The order is being financed by the Agency for International Development.

YOU OUGHT TO KNOW

Rails to the rescue: Late last month it was Chicago's turn to get buried under a blizzard. Last week, it was New York's. And in both instances, the railroads and rail transit lines came through the storms in good shape, keeping their lines open while planes were grounded, expressways closed or snarled, and bus traffic was at a standstill. Frozen switches and blowing snowdrifts delayed trains on the Pennsylvania, New York Central, New Haven and Long Island, but all roads operated both commuter and long-haul service through the height of the storm. For many, rail service to New York, Philadelphia and other cities was the only means of transportation.

Motive power simulators: The training of enginemen and transit car operators could undergo significant changes with the development of motive-power simulators similar to units being used by airlines. Because Link-trainer style simulators of locomotive cabs are becoming available, the Railway Systems and Management Association has scheduled a seminar on railroad motive power simulators for Mar. 7-8 at Chicago's Knickerbocker Hotel. The realistic instruction and practice in handling controls under varying conditions in a controlled environment has already won the acceptance of British Railways and London Transport. Air industry representatives will describe their extensive experience with simulators. The seminar will introduce dynamic simulators to the railroad industry and explain their economics and use (RA, Dec. 19/26, 1966, p. 35).

Parcel study group named: President Johnson appointed a commission to study small-parcel distribution services. Members are Edward W. Smykay, professor at Michigan State (chairman); James H. Morrison, former Congressman from Louisiana (vice chairman); Louis Rudin, former vice president, Spiegel, Inc.; Gayton E. Germane, director of transportation logistics, Stanford University; W. C. Mackey, newly named to DOT (see p. 7).

Transit riding up in Philadelphia: The Broad Street subway carried 50.4 million passengers in 1966—up one million from the previous year—according to Acting Public Property Commissioner William A. Costello. While the Broad St. subway represents 1% of the city's transit routes, it was pointed out, it carries 18% of the riders.

B&M train-off approved: The Boston & Maine will not be required to restore four passenger trains between Springfield, Mass., and White River Junction, Vt., the ICC announced last week. On July 6, 1966 the Commission's Division Three decided not to block the discontinuance of the trains, and the decision was then appealed to the entire Commission. In its ruling, the ICC, with Chairman William H. Tucker dissenting, found that the four trains are not required by public convenience and necessity and that their operation would unduly burden interstate commerce. The trains involved provided a connecting link in Washington-New York-Montreal service involving the New Haven, B&M and Canadian National. That through service has not been operating since last Fall when B&M discontinued its trains.

New arrival at Grand Central: The first electronic train information board in the U.S. has been installed at Grand Central Terminal. Replacing the chalk blackboard familiar to generations of passengers using the station, the new board is 59 ft long, 11 ft high, and is used jointly by NYC and NH to list arrivals and departures. Artkraft Strauss Sign built it, Transportation Displays installed and will maintain it. Train information can be instantaneously programmed onto the board by a typewriter-size control console located in the information booth on the main concourse of the station.

Truck tonnage: Intercity truck tonnage in the week ended Jan. 28 was 4.4% below that of the previous week and 2% below the volume in the corresponding week of 1966, according to American Trucking Associations.

Current statistics

Net Income	
9 mos., 1966	$658,000,000
9 mos., 1965	542,000,000
Carloadings, revenue freight	
5 wks., 1967	2,568,230
5 wks., 1966	2,590,345
Freight cars on order	
Jan. 1, 1967	56,618
Jan. 1, 1966	44,297
Freight cars delivered	
12 mos., 1966	89,892
12 mos., 1965	77,861
Serviceable cars	
Jan. 1, 1967	1,425,203
Jan. 1, 1966	1,402,459

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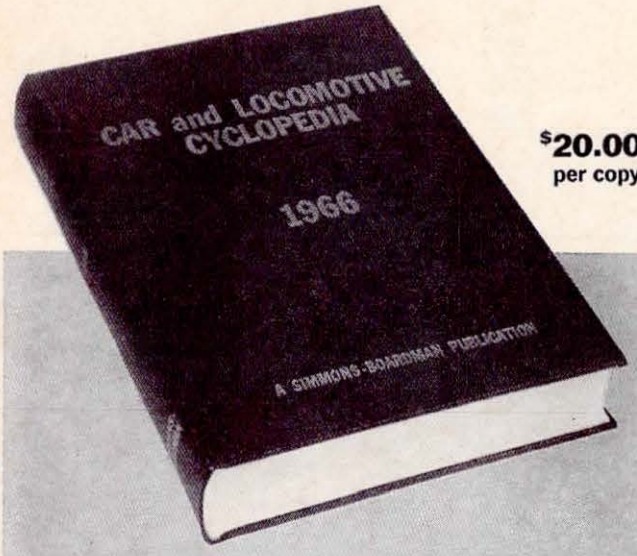

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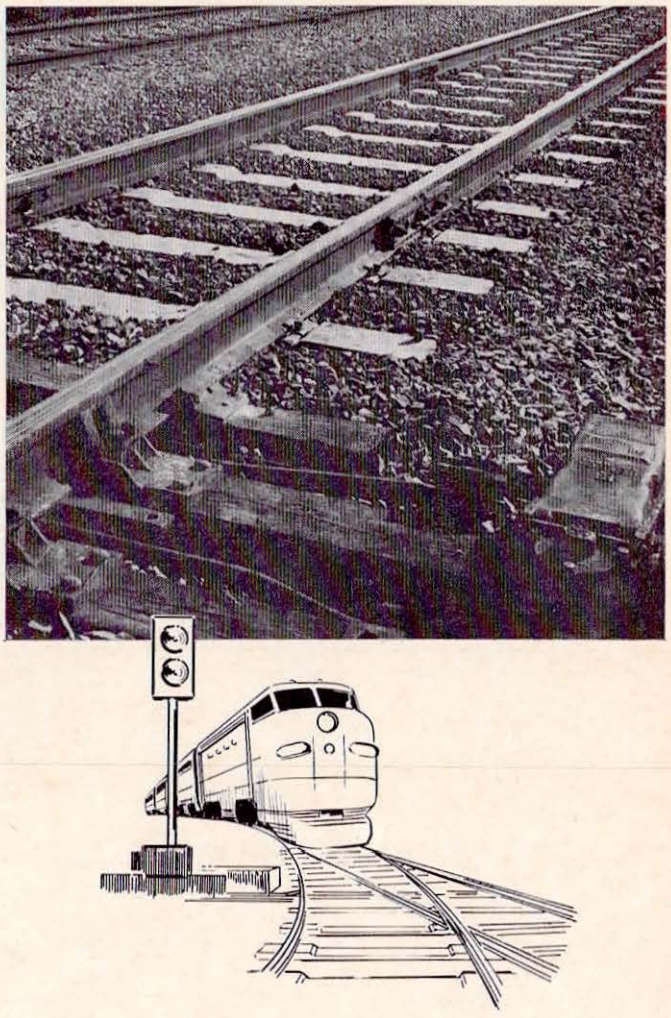

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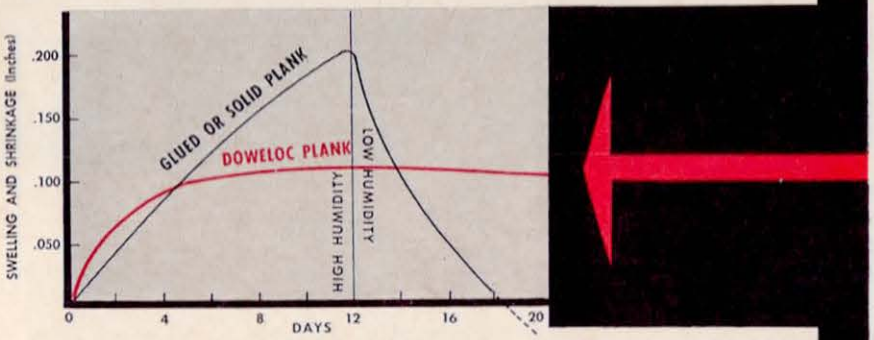

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Rio Grande sets up a brain trust

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TMC stands for Transportation Management Center. It's an entirely new department. And its goals will be "to translate the business-getting innovations and practicalities of transportation marketing into top performance of the railroad's primary job—carrying the freight and running ahead of the competition."

• **In 'high gear.'** Meeting these goals as Rio Grande sees it, is a matter of meshing "in smooth, high gear every operational function of railroading—coupling the right combinations of engine horsepower to the numbers of cars that will make for fast, dependable trains; seeing that the trains operate on schedule and that the schedules meet the critical needs of shippers; expediting priorities; and keeping constant track of every car, every shipment."

TMC will be a combination of computer capability and manpower skill and experience. Over-all head of the new organization will be John B. Norwood, assistant vice president-operations. Top staff man will be H. W. Bolton, manager of transportation, who comes to TMC from Rio Grande's former Transportation Monitoring Center, which is being merged into the railroad's new department.

• **Service group set.** A second major operation transferred into TMC is the former Traffic Service Department, which will be known as the Customer Service Bureau.

CSB's job will be to work with car-movement and car-location information, keeping in contact with on-line and off-line agencies.

Also coming into operation as part of the TMC picture is a computerized maintenance schedule for motive power.

Norwood puts the total job this way: "Management has been defined as the efficient use of all available resources to reach a desired goal in the most economical manner. . . . In the part of our operations that involves train movements, this is what TMC is designed to do." ■

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Abex Corporation, Division of SKF Industries .10-11, 16
American Concrete Crosstie Corporation 51
American Steel Foundries, Inc., Amsted Industries 6
Bethlehem Steel Corporation 3
Broderick & Bascom Rope Company ..... BC
Bruce Company, Inc., E. L. 43
C F & I Steel Corporation 44-45
Cullen-Friestedt Company 41
Difco, Inc. 42
Dow Chemical Company, The 17
Doweloc Division, D. B. Frampton & Company 52
Electro-Motive Div. of General Motors Corp. 14-15
Foster Company, L. B. 37
General Railway Signal Company 9
Griffin Wheel Company, Amsted Industries 33
International Car Corporation 38
International Nickel Company, Inc., The 39
New Departure/Hyatt Bearings, Div. of General Motors Corp. 35
New York Central System 31
Nordberg Manufacturing Company ..... IFC
Poor & Company 4
Pullman Standard, Division of Pullman Incorporated 28-29
Railway Educational Bureau 53
Safety Electrical Equipment Corporation 48
Speno Railroad Ballast Cleaning Co., Inc., Frank .. 40
Stanray Corporation 46-47
Streeter-Amet 41
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VIEWPOINT

The Erie-Ohio Canal—Who pays?

Schools may be teaching arithmetic via "the new math" but it can hardly be as interesting as the arithmetic in vogue at the Corps of Engineers, when the Corps is trying to get congressional approval for a new waterway.

Consider the figuring involved in the proposed Lake Erie-Ohio River Canal. The Corps says the project has a benefit-to-cost ratio of 2.19—which is just another way of saying that $1 of public expenditure will produce $2.19 in savings. Who will get the savings? The Corps doesn't say. Not the U. S. taxpayer. He will just foot the $1 billion the Corps estimates the project will cost. Nor do Ohio taxpayers (who will foot an estimated additional $400 million) figure to benefit much. Communities along the proposed canal are expected to build and maintain all terminal facilities—and must promise not to withdraw water for consumption purposes from the waterway after it is built, a limitation that many say will impose severe restrictions on new industry and population growth along the canal route.

Benefits to a few

It is obvious that benefits from the canal will go mainly to a limited group of shippers and an even smaller group of barge operators. As responsible analysts have pointed out, it would be kinder to the taxpayers if the Corps of Engineers constructed a railroad along the route of the proposed canal and transported the tonnage they say will use the canal —for free. And that analysis takes the Corps' estimates of costs and benefits at face value. But the Corps has a long, spectacular record of overestimating benefits and underestimating costs. To describe the Corps' method of determining benefits as peculiar would be an act of charity. One assessment of the project from a vantage point one would think the Corps would use automatically (the efficient use of national resources used in producing transportation via an evaluation of tonnage effects on incremental costs of existing transport modes) arrives at a benefit-to- cost ratio indicating the taxpayers will spend $1 to give 76 cents of benefit. And, as previously indicated, that benefit is to a comparatively small group. Another study, a comprehensive review of the Corps' arithmetic by the Upper Ohio Valley Association, indicates that total annual benefits would come to about $18.7 million (compared with the Corps' estimate of $118.7 million) and that total annual charges would be about $97.7 million (rather than the Corps' figure of $54.2 million).

The variation in estimates is not astonishing to those with a taste for reading the dull reports with which the Corps traditionally stuns the congressmen who have to pass on projects. As the Corps' Pittsburgh district engineer notes, with astonishing candor, in a report on the Lake Erie-Ohio River Canal, the Corps cannot use incremental cost estimating because "The project would not produce sufficient benefits to warrant construction . . ."

That is, we submit, a remarkable theoretical start for an idea that aims at putting almost a billion and a half dollars into competition with privately financed and operated transport modes. The Corps estimates benefits on the basis of published rail and barge rates (i.e., cost to shippers) when it must know that such evaluation can only be valid if the canal is to entirely supplant the railroads and other agencies that now handle the region's tonnage. The Corps must know that rail rates cover essential fixed costs that do not enter into barge rates—maintenance of right-of-way, taxes, passenger train deficits, return on investment, etc.—which is just another way of saying that substantial costs will be incurred by many other people to provide the few waterway users with service. Aside from the huge outlays from the taxpayers, thousands of shippers unable to use the waterway will ultimately pay for the higher costs on rail shipments as volume decreases lead to rises in unit costs.

A record of economic disasters

If the rails keep rates artificially low to stay competitive, the canal becomes even more of an economic disaster. Only a small group of shippers and barge people benefit either way.

This failure to take into account the effect of waterways upon competing land carriers is another glaring example of the Corps' near-sightedness. Many marginal waterways projects have already proved to be economic disasters. Take the Corps' decades of work to provide navigable depths on the Missouri. Last year, that project's cost to taxpayers soared past $650 million. Basic to the whole project has been the Corps habit of grossly overestimating benefits and underestimating costs.

It is curious that the Corps continues to get away with such outrageous use of public money.

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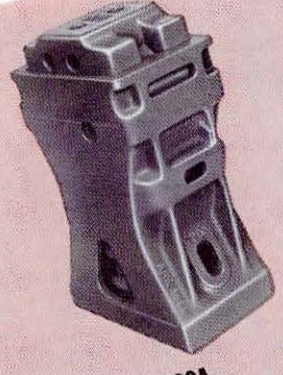

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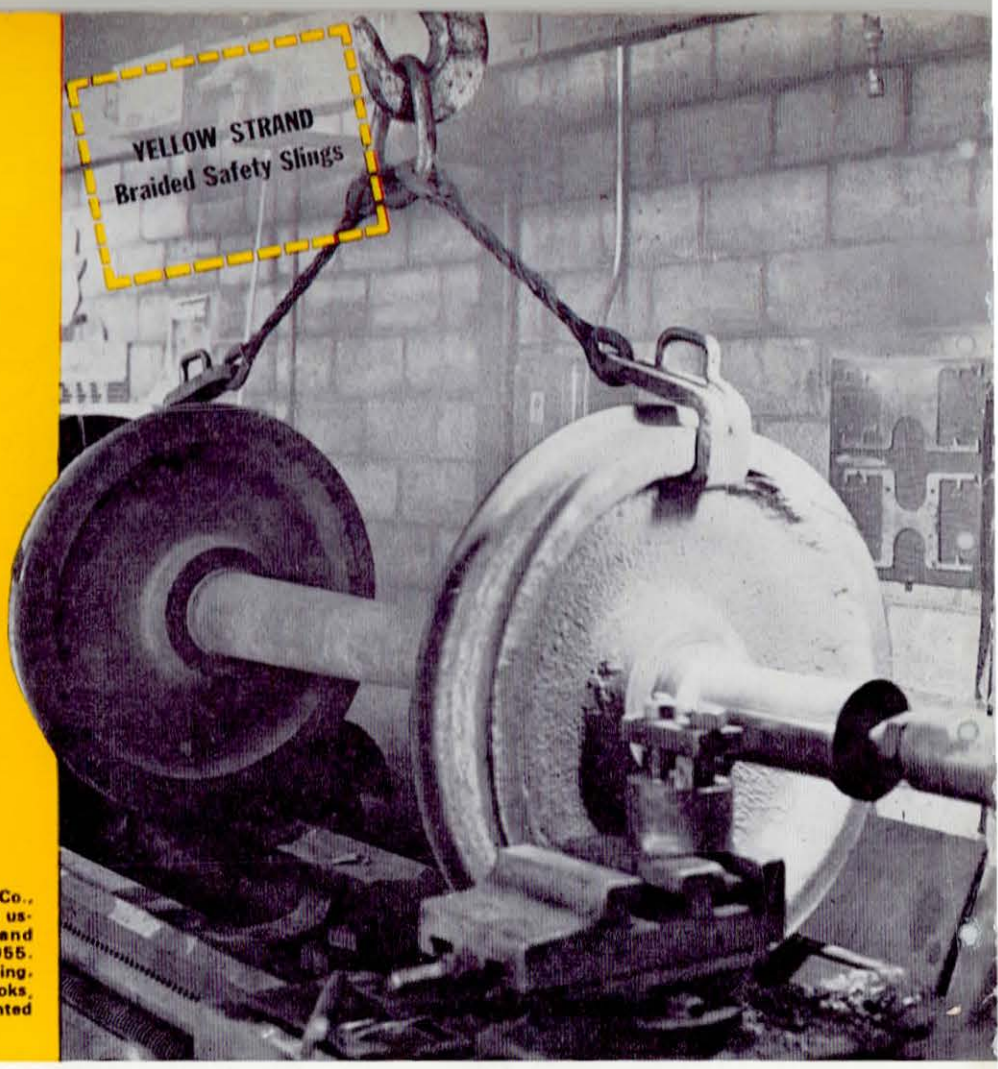

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